TRANSACTIONS

of

The Association of

Life Insurance Medical Directors

of America

SIXTY-NINTH ANNUAL MEETING

Whitman M. Reynolds, M. D.
Editor

VOL. XLIV

PRESS OF
Recording & Statistical Corporation
New York City
1961

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Printed in U. S. A.

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Harry Toulmin, M. D.	1910-1912
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William E. Porter, M. D.	1912-1914
Franklin C. Wells, M. D.	1913-1915
Homer Gage, M. D.	1914-1916
Walter A. Jaquith, M. D.	1915-1917
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Thomas F. McMahon, M. D.	1919-1921
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William R. Ward, M. D.	1921-1923
Chester F. S. Whitney, M. D.	1922-1924
Angier B. Hobbs, M. D.	1923-1925
Wesley W. Beckett, M. D.	1924-1926
Robert M. Daley, M. D.	1925-1927
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William Bolt, M. D.	1940-1942
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Albert J. Robinson, M. D.	1945-1947
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Transactions of The Association of Life Insurance Medical Directors of America

SIXTY-NINTH ANNUAL MEETING

The Sixty-ninth Annual Meeting of The Association of Life Insurance Medical Directors of America convened on Wednesday morning, October 19, 1960, in the Terrace Ballroom of the Hotel Statler Hilton, New York, New York, at nine-thirty o'clock, President Ennion S. Williams, M.D., presiding.

PRESIDENT WILLIAMS — "Oh wad some power the giftie gie us To see oursels as others see us." (1)

First, I wish to welcome our distinguished guests and our new members. Please make yourselves at home and feel free to participate in the discussions. I also assure you that you are exempt from my attempt at self-scrutiny.

How shall we look at ourselves? I propose to do this in the same manner that we are trained to look at others. I present, herewith, a mortality study of the members of this Association. This is made possible by the excellent records placed in our Proceedings by our Secretaries and Editors. It was necessary to go to the Directories of the American Medical Association for dates of birth. Since the first Directory appeared in 1906, the study covers the 50 year period between the meeting in 1906, and the meeting in 1956. There were 930 entrants who, during the period of observation, ranged in age from 25 to 95 years. Three hundred and seventy-seven withdrew from membership during this period and 377 were in the Association in 1956. There were 11,383 years of life exposed. One hundred and seventy-six members died during this 50 year period.

The expected number of deaths was calculated according to two different life tables. The first was a table of white males in U. S.

(1) To a Louse, by Robert Burns

1929-31, based on population census figures. Two hundred and sixty deaths were expected according to this table, giving the very favorable ratio, actual to expected, of 68 per cent.

For comparison with insurance experience, the Ultimate Basic Table of 1946-49, based on an intercompany mortality study, was used. One hundred and ninety-three deaths were expected according to this criterion. This gives a ratio, actual to expected, of 91 per cent.

What is the value of this? It is not a plea that medical directors receive preferred underwriting, nor is it an attempt to give you a reply for the rejectee who boasts of surviving medical directors who allegedly wrongfully rejected him.

This study was of value and interesting to me. It required a perusal of our Proceedings with diversionary excursions into early Presidential Addresses and discussions of examining problems that, after many years, still have a contemporary ring. I was interested in the early obituaries and was impressed by the professional standing, the civic contributions and the Civil War records of the founding fathers of our Association.

The thought that I do wish to leave with you is that it is possible to make small mortality studies with paper and pencil without the assistance of elaborate electronic devices. Certainly, we welcome all the help the actuaries can give us with their massive machine jobs, but I believe we can learn something about the technique of mortality studies and, possibly, in aggregate derive valuable information from repeated small studies.

In 1908, Dr. Oscar Rogers in his Presidential Address, said, "I cannot urge too strongly my views regarding the value of the testimony of small groups . . . . . Each observation we make serves to confirm or to modify our views and thus bring us nearer and nearer to the final absolute value of the factor we are studying."

We will now hear from one of our Funds, which is unique in the life insurance field — the Life Insurance Medical Research Fund. You have heard me, in the past, praise Dr. Dieuaide. I will not take the time to do it again. I think we are very fortunate in having a man running this Fund who does it as well as Dr. Dieuaide. We will let him speak for himself.

LIFE INSURANCE MEDICAL RESEARCH FUND

FRANCIS R. DIEUAIDE, M. D.
Scientific Director

Many helpful and encouraging advances have been made in work on the challenging problems of cardiovascular disease. During the past year, the Life Insurance Medical Research Fund played its role by aiding 120 research programs and supporting 19 research fellowships. Seven of our 1959-60 Fellows went abroad for their work, in order to obtain the special advantages of guidance by leading European investigators.

Noteworthy among recent reports is the finding of a high incidence of coronary artery disease in individuals with a particular behavior pattern, exhibiting marked sense of time urgency and strong drive. During working hours, men in this group were shown to excrete far more norepinephrine than those in control groups. A possible physiological link between behavior and vascular disease is thus brought to light. Dietary and other living habits were essentially the same in the various groups studied.

New methods have made it possible to obtain, more directly, information about the coronary arteries than was formerly available. X-ray studies of the human coronaries can now be made with only small quantities of contrast material. Both clarity and safety are greatly improved.

Another new technique permits catheterization of the coronaries in intact animals. Constriction and dilatation of these vessels have now been actually visualized. Helpful new knowledge has thus been gained of the cardiac effects of important drugs.

Fruitful work has been done on the development of collateral blood vessels which play such a vital role in recovery from coronary occlusion. A surgical procedure providing strong stimulus to the development of collaterals has recently been used in the treatment of coronary artery disease. Marked relief from angina pectoris has been reported.

Early changes in arteries have been studied with the electron microscope during the development of experimental arterio-

sclerosis. Characteristic damage was seen after only 24 hours. Fatty material made an early appearance under the intima and in the elastic layer.

Fatal myocardial infarction has been described in a monkey with diet-induced hypercholesterolemia. Another monkey, in the same group, developed extensive gangrene of a leg following arterial thrombosis. The experimental diet, containing moderately high levels of fat and cholesterol, had been fed to these animals for three and four years, respectively. Extensive arteriosclerosis in both animals is described as very similar to the human disease.

High blood viscosity and increased coagulability would be important factors in thrombosis. So far, attempts to correlate such changes with arteriosclerotic disease have not been very successful. However, patients with cerebral vascular disease have been reported to show a tendency to high blood viscosity. It was found possible to reduce the viscosity in these subjects by means of a low fat diet. In animals, high blood fat levels have been found to slow the circulation and so impair the supply of oxygen to the tissues. The red blood cells are described as becoming sticky and tending to form clumps.

Effects on blood fat levels at intervals throughout the 24 hours have been reported for various dietary fats. Meals with corn oil were followed by smaller elevations than usual diets. Other recent work suggests that deranged phospholipide metabolism may underlie the development of high blood cholesterol levels. The discovery has been reported of a new enzyme which catalyzes the synthesis of neutral fat.

Use of up-to-date methods has provided new information on the effects of digitalis in hypertensive and arteriosclerotic disease.

Gaps in basic knowledge of heart action have been filled. Recent work on the contractile proteins of heart muscle has put new emphasis on the importance of relaxation. A specific relaxing substance has been discovered. In other work, conditions favoring the maintenance of normal rhythm and those making for fibrillation have been described.

Contributions to the Fund for 1960 amounted to $1.2 million. Awards payable beginning July 1, 1960, totaled $1,084,013. Ad-

ministrative expenses for 1959-60 came to $77,857, less than 7 per cent of receipts.

At the time our Fund was established, cardiovascular disease was regarded with pessimism. Research interest in the field was unusual. Today, a large body of able workers are devoted to it. The outlook is one of confidence and enthusiasm.

I am most grateful for the opportunity to make this report and for the continued hospitality of the Association. It is also a pleasure to acknowledge the constant advice and support of the Medical Directors serving as Representatives with the Fund.

PRESIDENT WILLIAMS — Thank you, Dr. Dieuaide. It is always a pleasure to receive this report each year.

We are always glad to hear from Mr. Joseph C. Wilberding, Executive Secretary of the Medical Impairment Bureau.

Mr. Wilberding spoke on behalf of the Medical Impairment Bureau.

PRESIDENT WILLIAMS — The Association of Life Insurance Medical Directors of America has been working closer and closer through the years with our sister, or brother Organization, as you may choose to call it, the Medical Section of the American Life Convention. We are very happy to hear from its present Chairman, Dr. Scoins.

DR. WILLIAM H. SCOINS — It has been my good fortune to attend the meetings of this Association over the past 30 years and I am delighted to have the opportunity of attending this meeting, which promises a most interesting program.

This year, I have the honor of representing the Medical Section of the American Life Convention, with the very pleasant duty of bringing greetings of that Organization to the Sixty-ninth Annual Meeting of the Association of Life Insurance Medical Directors. The next meeting of the Medical Section will be held at The Homestead on June 19, 20 and 21, 1961. Our Program Chairman is preparing a most interesting and educational program. In addition, there will be the usual delightful recreational facilities, for the ladies are always welcome at our meetings and they will play a large part in our success. You are well acquainted with the beautiful surroundings of The Homestead. I want to extend a

very cordial invitation to you to come. I hope to see all of you and your wives at The Homestead next June.

PRESIDENT WILLIAMS — Thank you very much.

When the Life Insurance Medical Research Fund was founded in 1945, the Constitution was drawn so that expert independent advice would be available. Each year an Advisory Council, composed of outstanding authorities in medical research, meets for three days and considers the many requests for grants and fellowships. In the Fund setup, medical directors are given the responsibility of acting as a liaison between the Advisory Council and the Fund's Board of Directors. This responsibility becomes more important as Federal appropriations for medical research and the tax burden of our companies increase.

Six medical directors meet with the Advisory Council and listen to the deliberations. We wish each of you could have that opportunity. We believe it would put you in a better position to interpret and sell the Fund to your companies. This part of our program is an attempt to bring the Advisory Council to you.

I have been impressed by the extremely high calibre of the men Dr. Dieuaide has persuaded to serve. The first Advisory Council meeting I attended was presided over by Dr. Dickinson Richards, two weeks after he received the Nobel Prize.

This weekend, the American Heart Association meets in St. Louis and there will be two Memorial Lectures — the Lewis Connor Lecture by Dr. Eugene Stead and the George E. Brown Lecture by Dr. Stanley E. Bradley. At the present time, Dr. Stead is serving on the Fund's Advisory Council and Dr. Bradley is its Chairman.

I am honored to introduce to you Dr. Stanley E. Bradley, Bard Professor of Medicine and Chairman of the Department of Medicine, College of Physicians and Surgeons of Columbia University, a distinguished physician, a renowned teacher and a highly respected investigator, to give you "An Investigator's View of the Life Insurance Medical Research Fund."

AN INVESTIGATOR'S VIEW OF THE LIFE INSURANCE MEDICAL RESEARCH FUND

STANLEY E. BRADLEY, M. D.

Bard Professor of Medicine and Chairman,
Department of Medicine, College of
Physicians and Surgeons
Columbia University
New York

I should acknowledge, at the outset, that any investigator must look at an organization designed to finance his efforts with admiration and a sort of loving kindness. When put to it, I think, almost any investigator will admit to a certain amazement that people will actually pay him for doing work in which he finds so much enjoyment and such rich fulfillment. Consequently, I must acknowledge myself as a biased viewer. I think it is fair to say that most people in medical investigation would acknowledge the same bias.

The point of view expressed in such a statement implies a lack of self-interest and economic aggressiveness, perhaps, that might explain part of the difference in the social position of medical scientists in this country and abroad. But, in the last 15 or 20 years, a remarkable change has taken place. There has been a growing realization that life is made immeasurably more secure, more comfortable and longer as a result of the efforts of people working in laboratories and medical research centers all over the world. The realization that so much has been given to the peoples of the world by a few, working in ill-equipped, undermanned, and undersupported laboratories, has had far-reaching repercussions. America has awakened to the fact that it can look with pride upon its own national contributions and, as a result of this realization, energetic, practical, public-spirited men have organized support, which is now growing to immense proportions.

I think we can be proud that the life insurance companies of America have pioneered in this effort. The pooling of the annual contributions of more than 200 life insurance companies, in this

country and Canada, has been motivated by no narrow, self-interested desire to reduce the chances that one incurs in selling life insurance; but has been motivated, rather, by the knowledge that life insurance and the people working in this field profit by the public good and that public good can best be served by doing something to enhance the productivity of medical scientists throughout this country and Canada.

In its Constitution, in its initial formulation, the Life Insurance Medical Research Fund was established with the objective of increasing life expectancy. I think you will find, in examining the record of the Life Insurance Medical Research Fund, that this objective has been interpreted in no exclusive sense; rather, the aim has been to support new advances wherever they may come, with a view to increasing the effectiveness of our treatment and understanding of disease processes in general, and the advances supported by the Life Insurance Medical Research Fund have been advances that have supported, in a general sense, all of medicine and surgery.

In looking at the Life Insurance Medical Research Fund, no matter how friendly his feelings may be, an investigator must try to see it clearly and to judge its achievement in terms of the record, in terms of its organization, in terms of its social context, and in terms of what its future may be. The record, I think, is a magnificent one, and I believe that my feeling is shared throughout this country by all medical scientists.

Perhaps, I can explain what I mean most effectively by mentioning a few of the programs that have been supported over the years by the Life Insurance Medical Research Fund. I shall restrict myself to the last five years, during which time I have been connected with the activities of the Fund.

We can be proud that the Fund has embarked upon the support of research throughout all of medicine. But, of course, it has been activated by the desire to bring new knowledge forward with respect to those diseases that are the killers. Consequently, there has been a natural concentration upon research in cardiovascular and renal fields. This work, or a very high percentage of it, yields knowledge which is fundamental in character.

Now, I cannot say this without pausing for a moment to com-

ment on the apparent intellectual hierarchy that is implied in the classification of research as basic and applied. If one must value intellectual effort in research, one might very well put original investigation and original thinking as superior to derivative research. But, as soon as one does even this, one finds himself on very thin ice indeed, because all original investigation must hang upon earlier studies and is, in that sense, always derivative. Be that as it may, the Fund has supported both approaches — the approach to the fundamental problems and the approach to the application of new knowledge and the development of practical uses for it.

In the cardiovascular field, we find that the Fund is supporting fundamental investigation into the structure of the heart and blood vessels. The beautiful micron electron microscopy of Bennett, on the West Coast, and Fawcett, on the East Coast, has clarified our understanding of the structure of blood vessels. This work has shown us how we should think about the movement of fluid and particles through vessel walls.

Anatomy has also been studied at microscopic and macroscopic levels at the hands of Jean Oliver. Using an old-fashioned method of microdissection, he has learned a great deal about the nephron and the way in which nephron populations are integrated in serving the ends of renal function.

Bourne, in Atlanta, has developed new methods of histochemistry that will help improve understanding of the influence of chemical processes and in the field of biochemistry.

The Fund supports a galaxy of stars. The Fund can be very proud indeed of its part in supporting the work of Lippman of Harvard, Lardy of Minnesota, of Stotz, Kennedy, Lorber, Ball and many others who have written a new chapter in our textbooks on the processes that go on in cells, on protein, carbohydrate and lipid synthesis and metabolism, and on the mechanisms that permit cells to grow and to develop, oxidative activity, phosphorylation, and the biosynthetic activities in which cellular function is involved.

In the case of heart muscle and vascular muscle in particular, we have Mommaerts in California and Gyorgy in Boston, working on the character of muscle proteins and their chemistry.

Physiology has not been neglected. Drs. Richards and Cournand

stand out. They have been associated with many other workers in the field of cardiovascular physiology such as Conroe, whose beautiful cardiovascular studies have contributed so much to our understanding of what has become an increasingly important area, chronic pulmonary disease. The studies of Hamilton, Green, Burton, Brecher and many others are providing a theoretical underpinning which will make it possible for us to go on to a still more sophisticated and effective understanding of cardiovascular events.

The electrocardiogram has not been neglected. We have Rosenbleuth in Mexico and Chandler Brooks here in New York, working on physiological events in cardiovascular activity. These men and others are bringing forward new knowledge in this field.

The clinical application of these fundamental advances has been made by men like Stead, Eichna, Dexter and Myers. The study of renal physiology has been developed here in New York by Pitts and his associates and by workers throughout the country. I think, in many ways, the record of the Life Insurance Medical Research Fund spells out most of the recent advances in renal physiology.

Therapy and diagnosis have not been neglected. Modern advances in the hands of Lillehei, Cross, Dennis and others have been richly supported by the Fund.

This is only a scattering of programs and of names. The men who have been helped have been associated in some instances with Fellows of the Fund, and our Fellows have, in addition, gone out to many other laboratories, under the support of the Life Insurance Medical Research Fund, to make important contributions.

This group of some 260 men, over the course of the last 15 years, is a group that will carry forward the ideas of the Fund for generations. They will realize their ideals in their own work as successful investigators or, if they choose to go into other areas, they will carry forward ideals of selfless devotion to truth and concern with the public good.

Now, in the course of outlining a few aspects of the record of the Fund, I have mentioned many names. Names are important because they reflect, in their standing, the prestige of the Fund.

How has the Fund achieved this prestige? How do we account for it?

I think it is possible to account for it, primarily, by the wisdom of the founders of the Fund in setting up an Organization of the foremost men in medicine at that time, and by their wisdom in selecting Dr. Francis Dieuaide as Scientific Director. The stature of these men has conferred upon the Fund an enormous prestige. Scientific workers are, almost without exception, status-seekers. An honorific crumb goes a long way in scientific circles, I can tell you, as an incentive. High salaries and Cadillacs are much less effective than titles and so-called empty honors.

In endowing its awards with their own prestige, the men selected by the Fund assured its success. I have known young men who have turned down more remunerative fellowships to take the fellowship of the Research Fund because of the honor conferred. I can testify to my own sense of gratification at being asked to serve on the Advisory Council a few years ago, and I can assure you that gratification is not the usual emotion one feels in being asked to take up a new burden.

The organization of the Fund is absurdly simple, as Dr. Dieuaide has indicated, but it is one of the things, together with the organization of the combination of a lay and professional group to make the decisions implemented by Dr. Dieuaide, that appeals so much to medical people.

There is so little red tape. Site studies are made by people whose opinons one values. The approach is one of sympathetic understanding, rather than a bureaucratic and needling concern with detail.

But is the Fund necessary today? Granted, it has prestige and it has achieved a remarkable record. But haven't things changed a little? Indeed, they have.

Fifteen years ago, the amount of money available for research was much less than it is today. The Fund has poured $12.5 million into the support of grants and fellowships over a 15-year period. It invests, today, approximately a million dollars a year in research. When one compares this amount with the amount of money being made available by government agencies, which think in the hundreds of millions and are talking about billions of dollars for re-

search, the Fund's contribution seems small indeed. It seems reasonable for all of us to look at the Fund with the aim of deciding, or reaching an opinion regarding its usefulness in the future.

There is no doubt that the Fund has played an important role in determining the course of research in the past. Will it continue to do so in the future? I think that it will. I think that it will for several reasons that seem to me to be very good reasons.

In the first place, we cannot afford, as a free society, to let government take over the control and support of all investigative work. The people who are concerned with the establishment of policies under which governmental money is disbursed for research are as much concerned with this as we are.

In the newly developed plans to provide large funds for medical schools, it is expected that the amount of money given each medical school will be geared to the amount of research money received by it. There are certain fixed percentages of the total money received for research which will be given as a lump sum by the government to the dean of each school for use as he sees fit, but primarily to support research. However, the percentage of the funds received from privately endowed organizations, from foundations, from non-governmental sources, will be significantly higher than the percentage used in the calculation of governmental support; that is to say, for every dollar given to a school by the government, they will also give an additional 10 per cent, or 10 cents. If these plans work out, for every dollar received from other sources, something like 15 or 20 cents will be given to the schools. This is an incentive which measureably increases the total contribution that will be made by private funds, foundations and non-governmental agencies to research and medical education. The lack of red tape, the lack of bureaucracy, the freedom to move in directions that seem to be unpopular, or inadequately dealt with by governmental support, give, in addition, to the smaller foundations an enormous advantage in dealing with new developments. I think that, as in the past, we can look to the smaller funds for the major original departures, for support of major new changes, because the new things are never popular.

Of course, the Fund will go through an annual reevaluation

of its program. This reevaluation will be in the hands of the Advisory Council. The Advisory Council of today and the Advisory Council of the future will undoubtedly bring forward new developments in the support of research.

I think that the Fund has a very rich future ahead of it, and I hope that in some way I shall be able to take a part in it.

PRESIDENT WILLIAMS — Thank you very much, Dr. Bradley. I hope that all of you feel as I do, that now we are in a better position to inform our companies about the Fund and to bespeak its support.

I would like to take just a moment to read you a message from Dr. S. J. Streight, who was Medical Director of the Canada Life since 1925, Chairman of the American Section of the American Life Convention in 1936, and President of this Organization in 1945. He is now retired, and has asked me to read you this note:

I am keeping well. However, old age compels me to stay at home. My best wishes to all of my former associates. Please extend my feelings to all.

Our next paper is by one of our old-time friends. He has served on our committees and our Executive Council, and has appeared before this group with many fine papers. He is Dr. Henry Clifford, Second Vice-President of the Union Central Life Insurance Company of Cincinnati, Ohio.

ALCOHOLISM: THE SEARCH FOR THE HIDDEN ALCOHOLIC OF TODAY AND OF TOMORROW

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Alcoholism is a popular subject. No longer is it just an occasion for either wisecracks or sanctimonious moralizing. Twenty years has seen a tremendous growth of effective interest, concern and action by physicians, sociologists, public health officials and by business. The National Better Business Bureau calls alcoholism "Industry's Billion Dollar Hangover." Knowledge of the subject is rapidly advancing.

This morning, only one phase of alcoholism is being touched on; namely, certain diagnostic points.

Are you a hidden alcoholic, or can you recognize who is? Are you going to be an alcoholic in the future, some 5 to 20 years from now, or can you recognize who will be? Is there any way I can tell, or anybody can tell? These are questions on which I hope to shed some light.

The report is neither a statistical one, nor a completed product. Nor is the reporter an authority on the subject. The purpose of the presentation is to attempt to pinpoint, in an arbitrary manner, practical measures to ferret out who may be the alcoholic of tomorrow and who is now the hidden alcoholic of today. The measures recorded are "off the seat of the pants" of the reporter reflecting his own experiences in clinical, occupational and insurance medicine and in the social and business contacts of life, together

with a review of the literature on the subject, but particularly reflecting extensive correspondence with a wide variety of professional people interested in the subject from various angles. These correspondents gave freely of their knowledge and of their brain products. Some of the letters received were masterpieces on the subject in their own rights.

Originally, I delved into this subject because of suspicion that *bon vivants* were being confused with early alcoholics and treated in job classification and insurance applications as belonging to the so-called "steady free user" category delineated in the Lincoln National study of 10 years ago. The implications of this category would make the *bon vivant* either a hidden alcoholic or, at least, a drinker who would undoubtedly become an alcoholic in the future. Such an implication based *ONLY* on the amount of alcohol and/or the steadiness of use did not seem fair to me — and still does not. There must be other criteria than amount of alcohol and steadiness of use that are either more important or else that activate the importance of amount and steadiness of use of alcohol.

To be true: If alcohol is not used, there is no alcoholism. But where there is food, there may be food overindulgence; where there is sex, there may be sex irregularity; where there is religion, there may be religious distortion; where there are pills like aspirin, cathartics and tranquilizers, their use may be abused; and where there is tobacco, coffee, tea, coca cola, or even golf or fly fishing, there may be overindulgence to a point that interferes with the normalcy of the indulger's life.

Are criteria of the hidden, or future overindulger in these areas related to those of the overindulger in alcohol? In song and story, the trencherman and the whorehound accompany the drunkard. The thesis of related criteria, especially as concerns similar personality traits and situational strains, is undoubtedly correct and its truth must not be forgotten. Practical use of this thesis is of but little help.

Thus, just because a person drinks and enjoys it, does not mean he is "hooked" in the sense that a heroin addict is "hooked." The more the quantity habitually consumed and the more steady the use, the harder it is for the outside observer to judge the presence

or absence of the other criteria. But, in fairness to the *bon vivant,* as well as to the employer or insurer, an attempt to differentiate must be made. The *bon vivant* will welcome the attempt, the hidden alcoholic won't and the alcoholic of the future is still indifferent.

To delineate practical suggestions, answers to various academic questions should theoretically be made. Definitions of alcoholism. Incidence and epidemiology of alcoholism. Etiology of alcoholism. Natural history of alcoholism. In the interest of time and emphasis, these phases of the whole subject will not be touched on except in passing.

Both the narrow and the broad definitions of alcoholism are pretty well understood by the audience without verbalization.

Here is a check list to use when suspicion is aroused that a person may be a hidden, or a future alcoholic. The check list, on the one hand, can serve as a reminder to fact finders of where to look and for what to look, thereby being a help to inspection companies and to personnel officers. On another hand, it can serve as a reminder, to the interpreter, of clues that might otherwise be inadvertently uninvestigated or overlooked. But there is a danger of paramount importance raised by the very existence of any such check list. Literal use, thereof, would be far more harmful than helpful, and use by persons without medical background and experience tempts literal usage. Thus, such a check list should never be used for final interpretations, except by physicians whose medical background would automatically lead them to use it to remind them of clues to deeper truths and to remind them of all consideration necessary to supplement good judgment on any one individual case. In other words, final selection of borderline insurance risks, when alcoholism is a possible hazard, and final selection of new employees, or of promotable executives, or of continuance of valuable employees, whenever present or future alcoholism may be a suspicioned factor, must be a selection judgment dependent on the width of professional experience of a physician and must be, therefore, the *final* decision of a medical director and not of his competent and helpful non-medical delegates.

CHECK LIST

(For use in both searching out the hidden alcoholic and searching for clues to the future alcoholic)

(An * indicates major importance)

MAIN POINTS	COMMENTS
1. AGE: 40-55, the danger period (The younger, the worse the prognosis)	Usual "natural history," or course of the eventual alcoholic, is a 15 to 20 year span between initial use of alcohol and a definite anti-social episode (police court, complaint by spouse, hospitalization). Usually about 7 to 10 years after initial use, an increase in amount of alcohol and steadiness of use occurs. Prognostically, age is most important. The younger (in the twenties or even thirties) run an accelerated course of deterioration. They are poor risks. On the other hand, newly acquired alcoholism at 75 usually has a good prognosis.
2. FAMILY HISTORY: a and b) a) Alcoholic parent.**** b) Alcoholic siblings.	+ 50 per cent of known alcoholics have had one or more alcoholic parents and + 25 per cent, alcoholic siblings. (Per USA and Northern Europe Social Studies.)
c) Broken home. c)	Although troubled persons come from broken homes, alcoholism is no more relevant than any other "trouble."
3. HERITAGE:* (Including race, creed, culture, and socio-economic status)	Rarity of alcoholism among Orthodox Jews and in the pure civilizations of Arabs and Chinese. Frequency in Irish has been emphasized. (e. g. The proportion of Irish heritage among the alcoholics in Greater Boston is markedly higher than the proportion of Irish heritage in the whole population.) Such heritage becomes so altered by many factors such as influence of new geography, new social customs, occupation, intermarriage, and interfraternizing as to be probably a negligible factor in the USA of 1960.

4. MARITAL HISTORY:***	Although song, story and comic strip associate marital discord with overdrinking, usually as a justification for overdrinking, the "trouble" is more often either an effect and not a cause, or is an alternate expression of a deeper reason for both the "trouble" and the alcoholism. Regardless of "why," factual association of the two is not infrequent and is to be looked for.
Spouse trouble In-Law trouble	
5. WORK RECORD:*	
a) Shifting jobs frequently	a) Although frequent shifting of jobs is usually characteristic of any type of psychopathic or inadequate personality, interference by the job with drinking pleasures may underly the change more often than interference with golf or hunting or sex life; any one or all of which might be extracurricular indulgences that interfere with job performance.
b) Absenteeism	b) When unexplained, or associated with frequent weak excuses, absenteeism is obviously suspicious (and, as such, is often more effectively concealed by the crafty hidden alcoholic, especially if the alcoholic is a supervisor or an executive).
c) Late arrival or early departure from job. (Check hours of work on the job.)	c) Be suspicious of tardiness on any day, or prolongation of any lunch hour or coffee break, especially on Monday morning, or Friday afternoon, unless the hidden alcoholic realizes these are the "days of suspicion" and overcompensates (by meticulous dress and superficial mannerisms).
d) Wearing dark glasses to work and during morning	d) A weak but possible point to watch.
e) Odor of "stale alcohol" or appearance of "green tongue"	e) Also weak points to watch but very important when present.
f) Deterioration of quality of work in previously good worker	f) Deterioration of quality of work can legitimately be explained by a myriad of reasons such as conflicts with col-

leagues or supervisors, fatigue from overdoing, or loss of sleep, family illness, or personal illness, but these explanations could mask the fact that the ***true*** reason is hidden alcoholism.

g) Changes in working pattern of self-employed (note housewife)

g) If housewife, suspect alcoholism behind
1. Vague illness
2. Multiplicity of minor home accidents
3. Broken engagements or missing appointments
4. Increasing irritability or querulousness

6. SOCIO-ECONOMIC STATUS:

(Including levels of intelligence and education)
a) Under stress or strain (see No. 9)

b) "Petty gambling" tendency

There are no clear clues in the socio-economic factor, but the more independent economically and/or business-wise, or professionally, the harder it is to spot, let alone suspect alcoholism. A relationship has been suggested to petty gambling—possibly as a bid for self-importance.

7. DAILY HABITS:

a) Changes of

a) Suspicion of abuse of alcohol is aroused by:

1. Any change in drinking habits; more liquor bought openly and more money spent on it; less liquor bought openly but more money spent on it surreptitiously.

2. Any definite change of other (non-drinking) daily habits—more meticulous or more sloppy dress, more gregarious or more solitary, changed eating hours, giving up sports, no longer going to church, etc.

3. But it is important to realize, such changes may bode troubles other than abuse of alcohol (e.g. organic brain disease, non-alcoholic prepsychosis of any type, or even only simple maladjustments).

b) Sources of information about habits*

b) Sources of information concerning all habits and usages may be prejudiced, ignorant, or overprotective but see if any of the following are available and try:

1. Spouse (usually prejudiced).
2. Other relative or in-law, especially if same residence (possible distortion plus prejudice).
3. Neighbor (variable).
4. Family doctor (ideal source but clams up to spies).
5. Fellow worker (usually prejudiced or obstructing).
6. Domestic household servant.
   a) Valet (usually prejudiced).
   *b) *Cook* (questionable reliability and prejudice but can be excellent source).
   c) Chauffeur (often prejudiced).
   d) Cleaning lady (questionable prejudice or reliability, save concerning hidden bottles).
   e) Yardman or handyman (questionable reliability).

*7. *Janitor* (Apartment Superintendent) can be excellent source both of conduct and trash.

8. Trash collector (number of bottles disposed of in trash exceed number expected).
9. Local liquor store—may represent only part of total weekly liquor bill.
10. *Social Club Servants* (golf, college, city clubs).
11. Business secretary (rarely if ever unprejudiced).

c) Church going habits (and changes).

**** c) 12. *Religious Contacts*—priest, minister, deacon, or parish secretary on parochial level. Can be most important source, especially in close knit parishes where any change of church going habits is important, such as

wandering away from church ties due to inner embarrassment may be early clue. Most ministers welcome any legitimate investigation as a means to get at therapy in early phases of alcoholism and will prove highly cooperative to the identified investigator.

d) Police records.

d) When police records are positive, such findings must be interpreted intelligently and encourage further investigation and not blind condemnation.

8. PERSONALITY: DANGEROUS GROUND

a) "Normal" or "Abnormal."

b) Strong or weak.

c) Hyperaggressive and insatiable, or "happy go lucky" and drifting.

d) Clearly "mixed" (or warped).

Personality factors, either unique to, or suggestive of alcoholics, are widely considered the most important clues to prophesying the future alcoholic and identifying the present, but hidden drunkard. However, there is no agreement as to what these personality characteristics are. True psychoses, as a factor, are not generally considered more associated with the alcoholic population, prior to abuse of alcohol, than with the non-alcoholic population. A variety of behavioral traits or abnormal psychiatric states have been postulated, particularly by psychiatrists and sociologists, as being important factors, especially homosexual, oral-erotic, incestuous, masturbatory drives or conflicts. Other authors emphasize the importance of the drive for dominance that leads to the loneliness and frustration of insatiable ambition (including peer status). Still others emphasize the dependent personality, the longing to crawl back into the womb, the female (mother, wife, prostitute) dependency, the inadequacy or unwillingness to cope with reality. From correspondents I have had numerous impressively penetrating descriptions of the various "alcoholic personalities."

I am personally convinced that there is no such thing as a personality which is characteristic of, or attributable to, a future alcoholic. Similarly, I do not

believe a hidden alcoholic is characterized by any special type of personality, except as abuse of alcohol may cause eventual brain damage.

This latter is a complication of alcoholism that must be looked for, particularly in the "silent alcoholic," on physical examination and through report of performance on the job, just as neurological or hepatic changes are looked for.

9. SITUATIONAL FACTORS:

(In vocation, avocation, recreation, dependents, environment)

a) Are stressful

1) Clearly apparent
2) Possibly present
3) Potential but dormant

b) Are tranquil

1) Ooze contentment
2) On the road to acquired nirvana

But with this conviction that there is no such thing as an "alcoholic personality" existent before abuse of alcohol, is also the conviction that abuse of alcohol stems from mercurial intermixture of (1) Situational Factors and (2) Inadequate Fortitude. In this sense, personality plays a part but *ANY* personality plays the part, not just a *SPECIAL* personality. The weak sister, possessor of a dependent personality, succumbs under relatively minor situational discomforts into the escape of alcoholic abuse. The powerful, aggressive and strong personality may also succumb if the stress and strain is great enough. Also, the warped, but otherwise strong, personality may be struck by a situation in his Achilles heel.

Furthermore, I opine that personality and situation are intertwined concerning potential and hidden alcoholics only to the same degree that they may be intertwined in the etiology of any other abuse of social usages. Adultery may occur with a weak personality under mild stress, or with a strong personality yielding to powerful stress. Cheating in business, or even in sports, by a person of unimpeachable reputation has been known to occur under extreme duress. Even treason is not exempt if the right proportion of personality and stressful persuasion is involved. Similarly, alcoholism.

10. PHYSICAL EXAMINATION:

a) Organic constitutional factors (endocrine, hormonal, vitamin, catecholamine, enzymatic, allergic).

a) *NO SUCH THING.* Except as used for "face saving" words (especially "allergy"), or unjustified rationalizing, there is no concrete evidence of any organic constitutional defect that is either a sign of or an excuse for future alcoholism. Early suggestions in the medical literature contrariwise were based either on subjects displaying direct or indirect *results* of abuse of alcohol, especially bizarre or early dietary deficiencies or organic brain damage not present prior to alcohol use, or were based on animal experiments that neglected evaluation of other factors which have since been pointed out and illustrated by later investigators.

b) Specific findings to look for.

b) Suspect "hidden" alcoholic (though there can be other reasons, such as exposure to wind and dust, in 1 thru 4).

1. Capillaries around eye conjunctivae engorged.
2. Puffy edematous appearance of skin and subcutaneous tissue of face and forehead. This latter may be noted as deep grooving at eye corners, forehead and cheeks.
3. Flushing (in fair complexioned) with hyperemia developing; later "whiskey nose."
4. Edema mucus membranes inside nose, posterior pharynx and vocal cord (called "allergy" by many alcoholics).

* Hoarseness (Whiskey voice).

** 5. Tremor, persisting long after cessation of drinking and aggravated by "going on the wagon." *DANGER* not to confuse with tremors of other etiology just because there may be temporary amelioration by use of alcohol.

*** 6. *Tachycardia, persistent* and *unexplained* especially when persistent after sedative or not more than two drinks.

IMPORTANT CLUE (excess use of tobacco, coffee, or tea could promote tachycardia with or without alcohol).

7. Mild hypertension, systolic or diastolic, or both, possibly labile; particularly when persistent after sedative, or not more than two drinks.
8. Albuminuria of mild amount, often with normal sediment or with only hyaline casts, otherwise unexplained.
9. Pseudohyperthyroidism; those persons clinically suggesting "the nervous, perspiring, suffused hyperthyroid type" but with euthyroid tests.
10. Digestive symptoms of ill defined character with, or without intermittent anorexia, nausea, constipation (presumably gastritis) and especially without a clear thread of the syndrome of Food-Pain-Food — Relief distinctive of peptic ulcer.
11. Enlarged liver (not to be confused with the frequently found one or two finger ptotic liver).
12. Other classical signs of cirrhosis.
13. Transaminase increased and otherwise unexplained.
14. Urobilinogen test strongly positive and otherwise unexplained. (This quantitative test used by Consolidated Edison Company of NYC on suspects).

** 15. Anamnesis (stating medical history) vague, evasive, and/or inconsistent.

c) Performance tests c) Ready abstinence from alcohol for 72 hours without discomfort suggest the non-alcoholic drinkers (but could this test be policed?)

d) Tests of Personality and reaction to environment d) Very elaborate and cumbersome. Such tests certainly can give meaningful clues, but practical availability and applicability, even with captive subjects, is questionable. Much brilliant thought, trial, and observation is progressing along this line. (See bibliography.)

In conclusion, I wish to emphasize that there is no certain way to recognize a hidden alcoholic, or prophesy a future alcoholic. To attempt such recognition requires all the resources of the trained diagnostician, backed by wide investigatory authority and means, as well as appreciation of the intertwining of situational stress and strain with the degree of strength or weakness of a personality which may be normal, abnormal, or warped, in addition to recognition of the environment. Finally, I hope those of the audience who are not teetotallers are *bon vivants*.

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ACKNOWLEDGMENTS

The following persons gave material, encouragement, interest, and relevant observations, thoughts, and opinions on the subject matter:

Anderson, Dr. Karl W.
Barker, Dr. Norman J.
Barrett, Dr. Charles M.
Bishop, Dr. William R.
Boylen, Dr. Ernest L.
Christensen, Dr. Harry
Cochran, Dr. Harry A., Jr.
Colombo, Dr. Harry L.
Congdon, Dr. Frederick R.
Ellis, Dr. Laurence B.
End, Dr. Jack A.
Entmacher, Dr. Paul T.
Erdman, Dr. William J., II
Falconer, Dr. J. G.
Getman, Dr. E. E.
Goodell, Dr. Robert A.
Gossage, Dr. C. D.
Graham, Dr. Robert
Hammond, Dr. Vincent G.
Houston, Dr. A. B.
Hudson, Dr. Henry W., Jr.
Hutchinson, Dr. J. J.
King, Dr. Richard
Kirchmaier, Dr. Carl T.
LaPointe, Dr. L. Gordon
Larson, Dr. Albert L.
Lindner, Dr. J. C.
Mathewson, Dr. F. A. L.
Merritt, Dr. J. W.
Montgomery, Dr. R. C.
Moore, Dr. Samuel R., Jr.
Murphy, Dr. John R.
Oberlander, Dr. Andrew J.
Pearson, Dr. John S.
Pepper, Dr. D. Sergeant
Reeder, Dr. Clifton L.
Reynolds, Dr. W. M.
Schwarz, Dr. Berthold T. D.
Scoins, Dr. William H.
Shepherd, Dr. E. Bowie
Simpson, Dr. George E.
Stearns, Dr. F. R.
Stevenson, Dr. E. M.
Talbot, Dr. J. C.
Taylor, Dr. Maurice J.
Tegtmeyer, Dr. G. F.
Ungerleider, Dr. H. E.
Ward, Dr. Kenneth E.
Yochem, Dr. Donald E.
Stoeckle, Dr. John D.
Fitzhugh, Dr. Greene
Lindemann, Dr. Erich
McGinn, Dr. Sylvester
Bacon, Prof. Seldon
Fleming, Dr. Robert E.
Wilkins, Dr. George
Chafetz, Dr. Morris E.
Bell, Dr. R. Gordon
Ware, Mrs. Anna Budd
D'Alonzo, Dr. Constance A.
Franco, Dr. Charles
Schowalter, Dr. Edward
Adams, Dr. F. D.
Altschule, Dr. Mark D.
Bloomberg, Dr. Wilfred
Bock, Dr. A. V.
Brewster, Dr. Henry H.
Chittick, Dr. R. A.
Cobb, Dr. Stanley
Farnsworth, Dr. D. L.
Faulkner, Dr. J. M.
Fremont-Smith, Dr. Maurice
Hitchcock, Dr. James
Pittman, Dr. Helen S.
Shipman, Dr. T. L.
Siscoe, Dr. D. L.
Thomas, Dr. Jackson M.
Trevett, Dr. L. D.
Tompkins, Dr. John B.
Wheeler, Dr. R. R.
(Herman Wiener &
Episcopal Church)
Eppinger, Dr. Eugene C.
Isbell, Dr. Harris
Ross, Dr. W. Donald
Powles, Dr. William E.
Ludwig, Dr. Alfred O.
Lew, Mr. Donald F.
Thomson, Dr. Karl J.
Albertson, Mr. Robert

PRESIDENT WILLIAMS — Thank you, Dr. Clifford. I think you will have to admit that there is an area of controversy here. I would like to open this for discussion and remarks, or any questions, or any support of his ideas.

MR. HUTCHINSON LEATH — I would like very much to have our 6,000 investigators read Dr. Clifford's paper. But I do want to tell you what we have been doing along the line of habits. Earlier this year, we came into some figures, as the result of a study, indicating that 67 per cent of the population, or about 77,000,000, were drinkers, and 4,500,000 of the population were alcoholics. That information was broken down by sex, by economic level, by educational level, size of towns in which they resided, by frequency and by age. We took that material and put it in an educational course for our people.

These courses are run monthly, but this subject was so large and so important that we stretched it over a two-month period. With these facts, and the fact that the *per capita* indulgence in the United States is second only to France, we tried to determine what we would do and what our approach would be to the investigator on the street.

We tried to drop leads or sources of information; we made studies and found out that certain sources were favorable to the subject. We intend to study it; we intend to look for tips, and we are quite anxious to study and read the material that Dr. Clifford furnished.

PRESIDENT WILLIAMS — Thank you, Mr. Leath. Well, it looks like a job well done, Dr. Clifford.

DR. CLIFFORD — I will leave copies of this paper up here, if anybody wants to take one home.

PRESIDENT WILLIAMS — Mr. Webster, do you have a question? This is Mr. Webster of the Mutual Life of New York.

MR. WEBSTER — Ladies and Gentlemen: I don't think I should let the opportunity go by, first of all, without congratulating Dr. Clifford on an excellent presentation of alcoholism. As all of you know, this is probably the most difficult of the problems that the underwriter has to face, because one man's alcohol is another man's poison. Some of you have heard me tell before about the

old Scotsman who said, "Moderation is my motto. Eight or nine are all right, but after that its degenerate drinking."

The problem of the underwriter, which Dr. Clifford has set forth, is one which the specialist, about which Mr. Leath has spoken, can help a great deal to solve. The problem — and I am emphasizing what Dr. Clifford has said — of trying to determine what makes a man drink and what, if you please, will happen to the man in a period of subsequent stress, is an important one. We see many cases where there is a past history, in the not-too-distant past, of excess and apparent reformation and the underwriter wonders what is going to happen. If we could determine, by some means or another, whether this apparently reformed individual is an alcoholic or just somebody who went out "on a binge," it would be much easier to underwrite.

There is one question that came to my mind when I listened to Dr. Clifford as he talked about the crucial age between 40 and 55. One of the underwriting problems that we all face is not the 40 to 55 group because, by that time, the pattern has been fairly well established. We are most concerned with the 25 to 35, with a history of what looks like unusual drinking.

Like Dr. Clifford, I am not worried about the *bon vivant.* You seldom get criticisms of the *bon vivant.* On specialization, it is the gentleman whose habits are slightly different from those of his neighbors who causes the specialists, if they are good specialists, to put a few noughts on their reports. We are dealing with departures from the social pattern which are going to give a very definite extra mortality.

Finally, like Dr. Clifford, I suggest that the medical directors take over the underwriting of habits, because it would give me fewer headaches and not so much indulgence in alcohol on my own part.

PRESIDENT WILLIAMS — I am sure you will agree that our discussion would not have been complete without Mr. Webster's remarks.

There are debates from time to time as to whether the net effect of the discovery of the airplane was good or bad for mankind. I have heard similar arguments as to whether the sphygmomanometer has been a boon or a hazard in the treatment of patients.

Insurance medicine did not design the blood pressure apparatus, but it did much to popularize it and, therefore, must accept some responsibility for its proper use.

Dr. Perera's subject is directed at the core of our problem of risk selection. How can we evaluate the degree of hypertensive disease in a person with elevated blood pressure? Last year, the Society of Actuaries completed a large study correlating mortality with the level of blood pressure. This information must now be meshed with our other knowledge of hypertensive disease.

I asked several members to suggest a clinician whom they would like to hear discuss the problem and, invariably, the name of our speaker was mentioned. He is a long-time student of hypertensive disease and has published many reports on its natural history and on his followup studies. It is an honor to present to you Dr. George A. Perera, Professor of Medicine, College of Physicians and Surgeons of Columbia University.

HIGH BLOOD PRESSURE vs. HYPERTENSIVE DISEASE

GEORGE A. PERERA, M. D.
Professor of Medicine
Department of Medicine, Columbia University College of Physicians and Surgeons, and the Presbyterian Hospital
New York City

It is a great privilege for a physician, interested in education, research and patient care, to be asked to address his colleagues from the major life insurance companies. To the unenlightened, our respective functions might appear to have little in common. But you and I know that our mutual concerns are identical — to prolong useful and happy lives, to free the well and the ill from anxieties and insecurities, and to smooth the rough roads that some persons are obliged to take in this life on earth.

I should like to divide this discussion of primary, or essential hypertension (purposely leaving out any mention of secondary hypertension, such as might stem from kidney disease) into three parts and with a fair amount of gall. First, the physician, with no holds barred, will look at the actuary. Second, I'll bear the brunt of your retaliatory offensive and sportingly allow the actuary to look at the physician. Finally, hoping it will lead to mutual advantage and lower premiums, this physician will look at primary hypertension.

Kindly keep your seats and save the pressor agents until the end! After all, I'm a client of some of your companies.

Statistics are sometimes employed in the way a drunk uses a lamppost, more for support than for illumination. I charge you first with a gross, misleading abuse of statistics. Your volumes of accumulated data reach a conclusion that was obvious at the start. Your examiners secure a blood pressure reading and you find — *mirabile dictu* — that the higher the pressure, the greater the morbidity and mortality. This is no separation of the ill from the healthy. It is the obvious and inevitable result obtained from

population samples, gauging a graded characteristic. In a sample, say with single casual diastolic blood pressures in the 90-100 range, only a small percentage will prove to have organic disease; in another in the 100-110 range, a greater percentage, but again not all, will have a demonstrable illness. You're looking at the blood sugar instead of diabetes, or at the metabolic rate instead of hyperthyroidism. Naturally, the percentage of illness will be greater in those with higher blood pressure levels, but not every hypertensive will have disease.

And there are flaws and hazards in the methods and in the interpretation of your derived mortality experience which you, I note with a smile, are the first to admit. Your determinations are made primarily from single, casual blood pressure readings; there is a high proportion of reported readings in even 10's; examiners are apt to take more readings when the initial level is abnormally high and record the lowest found; no adjustment for fat arms is made; and there are instances, admittedly rare, in which the recorded pressure differs from the pressure on record. It can be suggested, furthermore, that an increasing number of hypertensive insurance candidates may have access to antihypertensive drugs. Finally, not your fault, the results of your studies — based on pressure recordings — add significantly to the alarms and excursions of a population which is less and less willing to accept the hazards of life or the inevitability of death.

Statistics such as yours, useful though they may be and designed to take care realistically of the standard deviation of your examiners, fail to consider the immense variety of individual behavior. Take Mrs. G., for example: Blood pressure 220/150, palpitation, cardiac enlargement! Scarcely insurable at first glance. But that was in 1930 and she is alive and kicking. Take Mr. L. as another: A whisper of uncomplicated hypertension, 140/90 a year ago, and less after a period of rest. Then the abrupt onset of headache, soon nausea and failing vision. He died a month ago of "malignant" hypertension. I wonder if it isn't possible to do better.

Now it's your turn to look at me and mine. How can we be helpful when each investigator plays a different instrument and

even a different tune? And a conductorless orchestra at that! Impatient at lengthy symphonies, we sample selected groups. Then, arbitrarily grading and grouping, we seek to drown out our confrères in a blare of trumpets. Some of us are prima donnas who attribute primary hypertension to a genetic abnormality, others to stress or, as they say in the U. S. S. R., to disturbances in the centers of higher nervous activity. Some doubt that it's a disease, others regard it as an assortment of ill-defined disorders. How can we add to your appraisal when we publish large numbers of scientific articles, each with a different definition; when we are inconsistent in our terminology, and vary widely in our reported results? There is no intended malice in our behavior. In fact, it is the product of integrity and the scientific approach. For wisdom consists in the ability to act on the basis of the available evidence — and evidence, for the investigator who is not in a position to follow large groups for long periods, is hard to come by.

You know the results: Primary hypertension is and it isn't; primary hypertension is a disease of youth and of aging; it's rare and it's common; it responds to treatment and it doesn't; patients survive, and they don't.

Modesty consists in the encouragement of other people to find out for themselves how important you are and how much you think you know. I shall now seek to display my modesty by reporting to you certain observations from one of the largest series of documented hypertensives in the world, upwards of 3,000 with the primary disease and 200 with the accelerated or "malignant" form.

In my opinion, about 5 per cent of the population of the United States will develop an established diastolic hypertension (with diastolic blood pressure levels which are repeatedly 90 mm. of mercury or higher) which cannot be attributed, as yet, to any primary renal, endocrine, central nervous system or other disturbance. Such persons, designated as having primary hypertension, may or may not have symptoms and survive, I have shown, for an average period of about 20 years. However, they develop cardiac hypertrophy, atherosclerotic and arteriolosclerotic changes

at variable rates and to various degrees. It is the complications arising from these changes, particularly from the atherosclerotic ones, which lead to death at an average age of about 55.

Is the dividing line, which I have set at 90 mm. of mercury, or thereabouts, purely arbitrary and hence artificial? I believe I am on safe ground. Temporary or intermittent diastolic hypertension may or may not be physiological; no one in his right mind would separate the well from the ill on the basis of a single, casually recorded blood pressure determination. What of those with an established diastolic hypertension? Despite the contrary conclusions of some investigators, there is considerable evidence that primary hypertension is a clearly defined disorder. First of all, the very fact that only 6 to 14 per cent of 6 published series, involving a total of more than 100,000 persons exhibited single, casual, diastolic values of 90 or above, indicates that this is an uncommon finding of possible significance. Secondly, when multiple readings were secured in 2,000 ambulatory, afebrile patients under the age of 50, I was able to prove subsequently that those with repeated diastolic values of 90 or above had unequivocal primary hypertension or, less commonly, hypertension secondary to renal disease. Thirdly, even without the patient's knowledge of an elevated blood pressure, I have often noted that the appearance of symptoms, signs and complications coincides with the first discovery of diastolic blood pressure levels of 90 or above, in some even before the pressure exceeds the 90-100 range.

Are we dealing with a disease? It's all settled; of course we are! If the pressure is recorded casually in an adequate population sample on the corner of 42nd Street and the Avenue of the Americas, one might easily reach the conclusion that the arterial tension reflects the aging process, or that the frequency of hypertension increases with age. But I have followed these individuals back to their lairs in Washington Heights, Harlem and Park Avenue, examined them repeatedly, and observed their subsequent fate. Then, it becomes apparent that the rise with age is the product of multiple derangements. In some, it can be demonstrated that the diastolic hypertension is intermittent and due to atherosclerotic changes in the aorta, to temporary environmental factors,

or even to false readings as in the obese arm. Yet others will be found to have an established hypertension secondary to a recognized primary disease such as nephritis. Subtract these and one is left with one curve, smoothly contoured and with its peak occurring in middle age. The curve of the age of onset of established diastolic hypertension in 200 patients with documented primary hypertension is also smooth. Its distribution, indicative of an onset generally in young adults and almost always before the age of 50, suggests a single and unique entity. There seems no necessity, at the present time, to confuse the issue further.

We have just completed another approach by plotting the highest, the average, and the lowest of 5 or more diastolic blood pressure values secured under casual circumstances in 1,000 persons aged 45 to 50. Forty-two were found to have all their readings at or above 90 mm. of mercury; 198 additional persons had at least one reading of 90 or above. Recording the highest single casual diastolic pressure, or, when available, the lowest reading after rest, a differentiation into clearly defined groups was impossible and bell-shaped curves appeared. However, if you take the mean or the lowest casually recorded reading in this series of 1000, 2 distinct groups were revealed. In the case of the lowest of 5 casual readings, 2 smooth curves of diastolic blood pressure, with their peaks occurring at 79 mm. Hg, plus or minus a standard deviation of 6.2, and 98 with a standard deviation of 5.4, were obtained with no overlap whatsoever. It is suggested that resting or single casual values of blood pressure may give erroneous impressions concerning the nature, presence, or absence of disease. Repeated casual levels of diastolic blood pressure, on the other hand, point towards a distinct abnormality with a diastolic of 90 as the dividing line.

Is primary hypertension inherited? No question about its being familial! Single family, family history and twin studies, as well as the direct measurement of the blood pressure in relatives, have been reported on numerous occasions. Taken together, despite many fallacies in collection or in interpretation, they point to inheritance as an important predisposing factor. To these data I can add the following: 31 per cent of 200 patients with documented primary hypertension gave a positive family history; of

100 patients, less than 40 years of age, 64 per cent had a positive family history; and direct measurement of the blood pressure of the parents of 20 young persons, with documented disease, disclosed repeated and established diastolic hypertension in at least one parent in 17 of the families. The more direct the study, the more conclusive the evidence.

Are there other factors which have a relationship to the development of primary hypertension? Primary hypertension in this series of patients and in the reports of other series, is twice as common in women as in men. Only in women is there a significant difference in body build, with the finding that they are of normal height but that their weight, on the average, is about 30 pounds above that of the normal female population. Studies of the dietary history and analyses of the urine sodium do not support the theory that a large intake of salt is an important predisposing factor. Data concerning the simultaneous onset of hypertension during pregnancy or the menopause indicate a coincidental association only; these are situations which bring the patient to the doctor, but in almost all instances the hypertensive disease antedated the event. Finally, I have been unable to obtain positive evidence, as yet, supporting the hypotheses that hyperreactivity, psychological influences, environment, or outside agents play any convincing part. In summary, only familial or host factors seem to be established as having a causal influence.

What is the role of the blood pressure in the disease and its complications? It is easy to attribute everything to the rise in arterial tension, but is it possible that the hypertension is only a physiological manifestation of a disease? There is considerable evidence pointing toward variations in pressor response and disturbances in salt and water metabolism in patients with primary hypertension as compared to normal subjects. We have shown that abnormal increases in blood pressure followed desoxycorticosterone administration in 3 of 25 young normotensives, that 4 of 25 placed on salt restriction failed to show the customary weight loss and diuresis, that 7 of 26 normotensives receiving thiocyanate had an unusual sodium diuresis. Ten of these 14 hyperreactors had a positive family history of hypertension; thus far, over the years, 4 have become hypertensive. Perhaps the

blood pressure abnormality follows some underlying defect.

There is some suggestive evidence of a causal relationship with reference to atherosclerosis. Experimentally, hypertension will accentuate atherosclerosis resulting from cholesterol administration in some animal species. Clinically, cerebral vascular accidents and myocardial infarction are more common in a hypertensive population. Pathologically, even after corrections for age and weight, the extent and degree of atherosclerosis is greater in those who had previous hypertension than in those who had a normal blood pressure. Although I can state almost categorically that the blood pressure level, as recorded under routine or casual circumstances, is unrelated to the subsequent development of cerebral or coronary artery disease (determined by following 150 patients at close intervals until death) the higher and more fixed the diastolic blood pressure, the worse the prognosis. Twenty-five hypertensives whose blood pressures failed to drop significantly after rest died at an average age of 44; 25 who demonstrated lability in their readings died at an average age of 56. Comparable data are not available to support a clear relationship between pressure levels and either cardiac hypertrophy or arteriolosclerotic complications, but the possibility that the blood pressure may not be the sole or the dominant factor for the shortening of life must be kept in mind.

About 1 to 2 per cent of patients with primary hypertension develop the accelerated ("malignant") form of hypertension. This condition also occurs rarely *de novo* or, more frequently, as a sequel to many primary renal diseases. It is characterized pathologically by widespread necrotizing arteriolitis and proliferative endarteritis, clinically by an accelerated degree and rapid progression of renal damage. Usually, the diastolic pressure is high and non-labile; retinopathy and papilledema are frequently, but not invariably, present; and, on occasion, transient encephalopathic crises may occur. Untreated, patients with the accelerated form of hypertension survive for an average period of one year, dying of uremia unless the course is terminated along the way by complicating heart or brain damage.

What makes the accelerated form of hypertension? Some feel that it is produced by the height and severity of the blood pressure

elevation and that it is solely a more intense form of hypertension which can be reversed by appropriate therapy. I have seen 200 patients with this disorder, the diagnosis being documented subsequently by biopsy or autopsy. Those with primary renal disease are not included.

Granted that prior hypertension predisposes to the "malignant" form, I'm convinced that it is an entirely separate and superimposed process. More than 30 per cent were between 37 and 42 years of age, the curve of age incidence being very different from the bell-shaped curve one encounters in patients who never develop the accelerated form. It occurs at an earlier average age in women than in men. Whereas, two-thirds of the patients with primary hypertension are women, males predominated in the series with the accelerated form in a 6 to 4 ratio. Half of the patients were Negro, confirming the susceptibility of this race. The women who developed this disorder were taller by about 2 inches on the average, in comparison to normotensive women or to other hypertensive women; and, in Negro women, but 1 of 50 had an A blood group, this one having an Irish father. Fifty per cent noted the abrupt onset of symptoms, sometimes measured in minutes and hours. Certainly these observations point to a susceptibility factor rather than to acquired factors alone.

There it is! A simple and clear story of the evolution of a disease, a disease which has many more characteristics of an inborn error in metabolism than of a state created by the vagaries of the environment! Why is it that no one believes me? They say my experience is obtained from a selected group. They say I have set up my own criteria, arbitrary ones at that, for diagnosis and definition. They say I don't know what the blood pressure does nights. They say my data don't agree with theirs. Maybe they are right.

In short, you are interested in large populations, preferably low risk, evaluated by simple means so that data secured by quick appraisal can have actuarial meaning. I believe there are errors in your methods.

We, on the other hand, awaiting some definitive test that rings

a bell or turns the urine purple, are obliged to utilize a retrospective approach. We use one measurement — the blood pressure — which is merely a manifestation of disease; others, such as the electrocardiogram and renal function tests, may reveal a fire but give no indication of the length of time it has been smoldering. I believe there are errors in our methods.

If my view of the evolution of primary hypertension is correct, then it is possible to state that an intermittent diastolic blood pressure reading of 90 mm. of mercury or more is a cause for suspicion; that repeated readings in this range (whether or not they fall on rest) mean trouble in plus or minus 20 years; that the longer the duration the worse the prognosis; and that par for the course, once heart, cerebral, or renal damage is demonstrable, is less than 5 years.

And so I suggest we get together. You have the mathematicians, statisticians and interpreters to put us to your test. We, emphasizing the yes-or-no approach to the existence or absence of disease and its natural history, if present, may have a method of prediction which will be more meaningful than yours.

I honestly believe that the net result of a combined effort will help more people, sell more insurance, secure more futures and be to our mutual benefit and that of our patients and our insured.

PRESIDENT WILLIAMS — Dr. John Hutchinson has represented this Association on the Joint Committee on Mortality Studies with the Actuarial Society, and I will ask him to open the discussion on this paper.

DR. JOHN J. HUTCHINSON [New York Life Insurance Company] — We need that lamppost, not so much for support but as a guide point or landmark, at least until the lights are turned on. It doesn't solve our problem to indicate that we must charge this man more for his insurance — we must also say exactly how *much* more, and what do we have to offer in support for our quantitative estimate.

I would like to emphasize Dr. Perera's comments regarding a diastolic pressure of 90 mm. In the intercompany study published last year, diastolic pressure of 90 was the dividing line below which the mortality experience averaged less than 125 per

cent, and above which the experience exceeded 125 per cent. This was invariably true for each decade covered in the study.

Let us look back 60 years or more in the history of medical underwriting. The underweight applicant then was a problem. As a class, significant degrees of underweight (20 per cent or more under average weight) did not produce standard experience. Over one half of these individuals died of tuberculosis and our predecessors, not having x-rays available, were extremely concerned with the quality and background of the medical examiner. Frequently, in those days, papers at the annual meeting concerned themselves with how to select and choose competent medical examiners who could, by physical diagnosis alone, assist the companies in excluding individuals underweight by reason of active disease processes. Underweight remained an objective measurement which could be associated with increased mortality and would, therefore, remain important. By an analogy today, we need readily available measurements, tests, or other objective criteria for differentiation among those individuals with borderline blood pressure elevations who will give a normal mortality experience, from those who have significant hypertensive disease.

Men like Dr. Perera are adding to the wealth of information from which, I am convinced, our needed underwriting aids will eventually come. I wish to express my personal thanks to Dr. Perera for joining us today and for his stimulating presentation.

PRESIDENT WILLIAMS — I would like to ask Jeff Thomson if he would care to continue this discussion. Dr. Thomson is both a member of this Organization and a practicing physician at the same time.

DR. K. JEFFERSON THOMSON [Metropolitan Life Insurance Company] — It is a privilege to discuss Dr. Perera's paper. Although associated with a life insurance company for many years, my interests have been primarily concerned with the health conservation of its employees. This activity has provided an unusual opportunity to observe, over a long period of time, relatively large numbers of people, most of whom were well enough to be at work. It is in the light of these observations that I wish to make some comments about Dr. Perera's splendid and timely presentation.

First of all, I would like to agree in general and wholeheartedly with what he has said. Basically, as I see it, what the clinical point of view challenges in the build and blood pressure study is the implication that, no matter how actuarially sound, one can really predict in an individual the significance of a single blood pressure reading or several of them on any given day or, at best, on a few examinations. The actuarial soundness for business purposes of such determinations is not questioned, but the implications resulting therefrom, I believe as does Dr. Perera, should be challenged.

In this regard, I would like to make several points, most of which Dr. Perera has touched upon but emphasis of which may provide a better understanding of the problem. I am pleased that in his studies the breaking point of abnormal blood pressure is 90 mm. Hg diastolic, which makes his and our data strictly comparable.

First, attention must be paid to overall blood pressure behavior. Observations we have made clearly show that individuals classify themselves in several basic types of blood pressure behavior which are shown in figures 1, 2, and 3. It is fundamental in the understanding of blood pressure abnormalities to keep these patterns clearly in mind. Such evidence as we have, I believe, disposes of the illusion that diastolic blood pressure normally increases with age.

The conclusion of the actuarial study that average blood pressure increases with age is undoubtedly true, but the conclusions have been misinterpreted and taken to imply that the diastolic blood pressure increases with age as a normal process in a large proportion of normal people which, in our experience, is simply not supported by the facts. I would like to state emphatically that our observations on normal individuals over many years of study show that in the majority of "normal" people diastolic blood pressure remains essentially unchanged with advancing years.

The first three illustrations are all similar in format. On the bottom are years of observations; height of blood pressure is on the vertical column. Figure 1 shows what happens to most of the people whom we consider to be normal when followed over long periods of time. You will note that the diastolic blood pressure

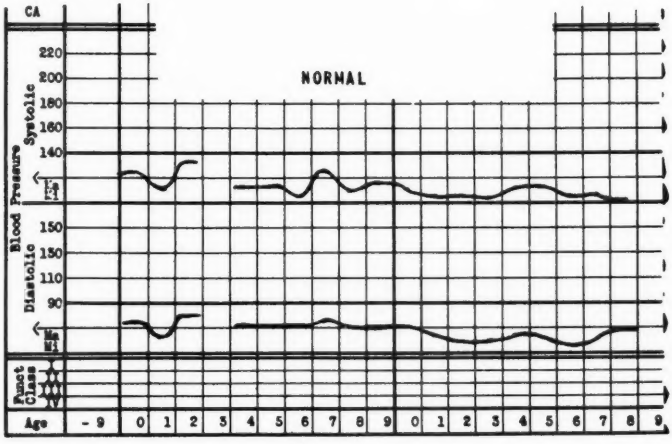


Figure 1

appears essentially unchanged for the entire period of observation. Of some nearly 3,500 people, about 2,500 have shown this pattern of blood pressure behavior as long as we have followed them.

Nothing will be said about systolic blood pressure behavior as I think that is quite another point.

Figure 2 shows what happens to one group of individuals who become hypertensive. They may or may not have had a period of normalcy before but, as you can see, in general, when they become hypertensive, they remain so. It turns out that about half of the people who have abnormal blood pressure behavior in our study become afflicted with a condition that is associated with consistently elevated blood pressure behavior.

Figure 3 represents a group of individuals who, I think, have been largely overlooked. Dr. Perera mentioned them in passing. Nearly half of our group of hypertensives, or people with abnormal blood pressure behavior, show this fluctuating type of blood pressure behavior. They may go as long as three, four, or five years with elevated diastolic blood pressure; they may have periods or normal blood pressure for several years and, in between,

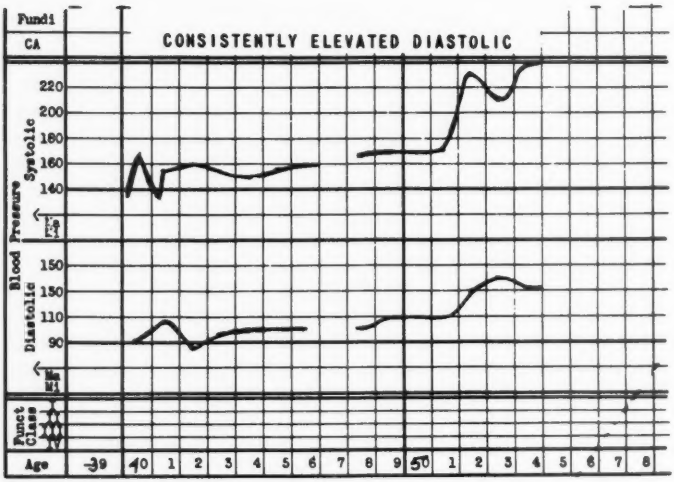


Figure 2

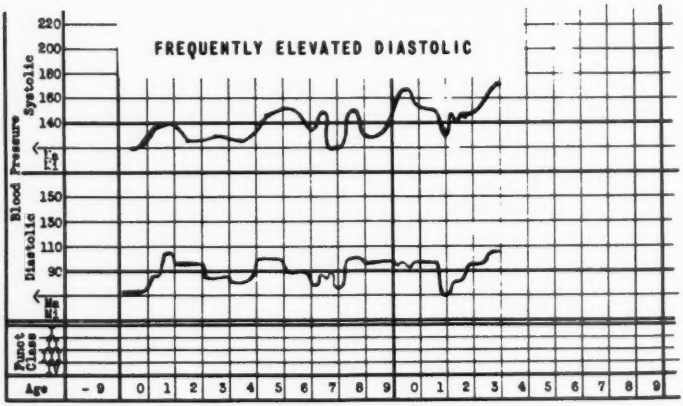


Figure 3

they may be up one year and down another. It turns out that in this group of people, the amount of fluctuation can be quite large and, in over 70 per cent of them, the usual diastolic blood pressure,

when elevated, is 100 mm. Hg or more. These, then, are not necessarily people with minimal blood pressure changes.

I would like to say a bit more about these individuals who have the fluctuating type of blood pressure behavior because they constitute, in our experience, roughly half of the people who have blood pressure deviations that are significantly important. There is no doubt that, among this group there is vascular disease and there is excessive mortality; yet, their course of blood pressure behavior is distinctly different from that of individuals who have sustained hypertension. These should become important individuals, blood pressure-wise, if adequate information about them were available. Presently, depending on chance, they are considered either as normals, if they are examined in a phase when their blood pressure activity is normal, or they are labelled as hypertensives, if examined in a phase when their blood pressure has increased. Actually, they belong in neither category. This group of cases raises the question of whether one might not improve greatly the underwriting of risks, blood pressure-wise, by making a real effort to learn more, when possible, about the state of blood pressure behavior, just as one gets more detailed information in underwriting about other chronic disorders.

I would like to ask, "Is it really reasonable, in 1960, to use the same blood pressure tables for underwriting purposes for men and women?" Every study of any validity, of which I am aware, so convincingly points out such significant differences between the mortality of males and females with elevated blood pressure that continuation of this old practice seems unrealistic.

The data in figure 4 are broken down by sex and in groups aged 55 and over, and under age 55. This graph illustrates some of the differences in behavior between people who have normal, frequently elevated and consistently elevated blood pressure. As you can see, there are enormous differences in terms of blood pressure behavior and the incidence of cardiovascular complications, particularly in males over 55 as compared with females over 55.

Figure 5 serves to emphasize the point that was just made. In our group of normal people, the overall mortality was about 5 per cent. The people who had consistently elevated blood pressures had a mortality of almost 22 per cent, and for the people who

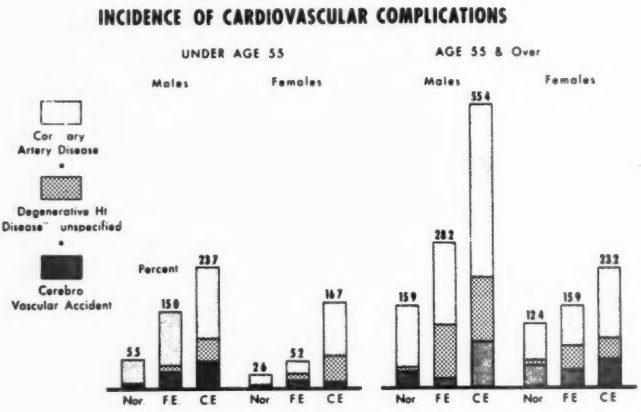


Figure 4

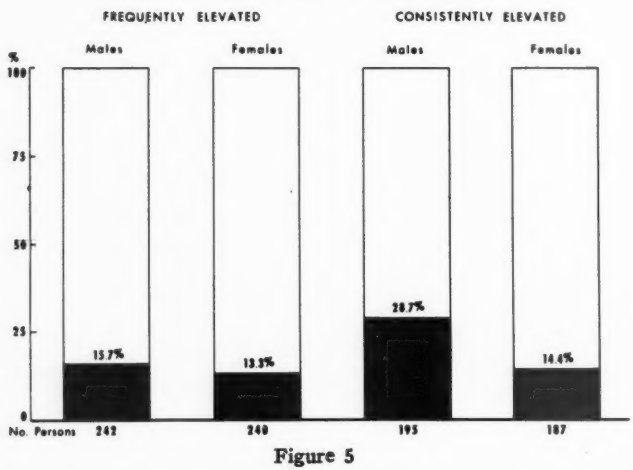


Figure 5

had fluctuating blood pressure behavior, the mortality was 14.5 per cent, which clearly indicates that these are different kinds of people in terms of the significance of their blood pressure behavior.

Finally, as shown in figure 6, I would like to point out that even in those with normal blood pressure behavior, the majority of deaths, over 50 per cent of them, are still from cardiovascular causes. The people with fluctuating blood pressures have 60 per cent of their deaths, and the real hypertensives have about 80 per cent of their deaths due to cardiovascular disease.

CAUSES OF DEATH IN PERSONS WITH NORMAL AND ELEVATED DIASTOLIC BLOOD PRESSURE

DIASTOLIC BLOOD PRESSURE	TOTAL DEATHS	CAUSES OF DEATH				
		TOTAL		CARDIOVASCULAR	NON-CARDIOVASCULAR	UNKNOWN
		NUMBER	PERCENT			
NORMAL	5.2%	130	100%	50.8%	43.1%	6.1%
FREQUENTLY ELEVATED	14.5%	70	100%	60.0%	40.0%	
CONSISTENTLY ELEVATED	21.7%	83	100%	78.5%	13.3%	7.2%

Figure 6

Finally, it needs emphasizing again that even in individuals who do not have aberrations in blood pressure behavior, cardiovascular disease or, more specifically, degenerative heart disease is the chief cause of death. This and other observations raise the question, already mentioned by Dr. Perera, as to whether elevations or disturbances in blood pressure are really any more than a particular symptom or manifestation of some more basic vascular disorder, the genesis of which may well lie in a fundamental inborn metabolic derangement. If this be so, the implications for underwriting are enormous and make more imperative than ever the need for an enhanced cooperative effort between the underwriter, the clinician, and the clinical investigator.

PRESIDENT WILLIAMS — Thank you, Dr. Thomson. Dr. Perera's fine presentation is now open for general discussion.

QUESTION — Dr. Perera made one comment in his paper about the fact that we can anticipate difficulty, plus or minus 20 years, and he brought out the fact that the longer the duration, perhaps, the worse the outlook. I wonder if he would care to comment on the point of view taken by Alexander Burgess that, if the person

goes for 8 to 10 years with an oversized heart and there is no evidence of impaired renal function and no evidence of disease is present, this person has very little extra mortality. In other words, there is so little disease that you might almost disregard this elevation.

QUESTION — I would like to know what effect this view would have on the longevity of the hypertensive patient.

QUESTION — I would like to ask Dr. Perera how completely he rules out, or apparently completely rules out, the question of environmental effects, such as stress in aviators and those people who have unreasonable bosses.

PRESIDENT WILLIAMS — Dr. Perera, would you like to answer these?

DR. PERERA — I think, as regards the first question, I am really in accord with Dr. Burgess and was deviating a bit from my approach to the individual patient in being a statistician. That the average hypertensive has an average course makes sense but it is equally true that the cause of trouble is the organic pathology which may appear. Of necessity, if the individual patient, even with rather long-standing hypertension, is free of demonstrable organic disease, the better the outlook for that individual patient. The effect of treatment, of course, is a very thorny question, too, depending again on the definition and the course of the disease.

The point in the course of the disease at which therapy is initiated is, to my amazement, the one place where most people in the field agree. They rarely agree on anything. But therapy in the earlier stages of malignant hypertension does modify the life span in about one third of the patients. Without therapy, almost all are dead in under 2 years. With fairly strong treatment, about one third of the group are alive 5 years later, and some for many, many years.

We have just completed a very small study, taking a group of patients with enlarged hearts and with the beginnings of organic damage, but no real focal areas, if you will, of damage, and matched each one of these to a patient with the same complications, the same age, sex, race and so forth, and at that well-developed stage in the course of their illness, but treating one group and not the other. We have not been able to see any effect

whatsoever on survival. Nor is that so much of a surprise. Probably, the pathology is there, even though the explosion of a myocardial infarction or vascular accident of some sort has not appeared.

What you and I would like to know, and I don't think anyone has answered up to now, is, what if we treated patients with very early disease? Is it possible then that by lowering the blood pressure, we might delay or prevent the atherosclerotic complications, which are the most frequent ones? My guess is yes, but, as practical physicians, you and I know that to put people on drugs for 5, 10, 15 or 20 years — recognizing that some would stay with the doctor and some would not stay with the pills and sometimes the pills won't stay with the patient — is almost impossible. The net result would be that only a small percentage of fairly stable characters, raised right, and recognizing that they were participating in an experiment that possibly could not be proven, would participate in such a series.

I don't think that drugs in a large enough series have been studied, as yet, to answer this important question of the possible effects of therapy very early in the disease. This may, of course, if it proves to be correct — and there is some influence and pressure on the development of atherosclerosis — be an important thing to you and me in terms of the survival of these patients.

As for stress, I can't rule it out, but, doggone it, I don't think we have any proof that rules it in! You'll find stress all over the world. You find it in the jungle and you find it in Times Square. You find hypertension when you really look for it, and fairly close to the same incidence, all over the world. There are a few spots, high in the Andes or in New Guinea, where there seems to be much less. One has to be sure always about complicating renal disease or other things that might mask hypertension. But it seems to me that a slightly more "wound-up," more tense individual may be the product of the disease.

This may be part of the symptomatology of some patients with hypertension, and to find any positive proof that stress makes a disorder when all the implications, the familial ones and so on, point away from environmental factors — well, I don't think we can rule it out as yet, but I know of nothing that rules it in. I

suspect that even in the long run, if stress is a factor, what we need is to remove the gunpowder from the bullet, and then pull the trigger to our heart's content, and all will be well, thank you.

PRESIDENT WILLIAMS — I am sure we are all indebted to Dr. Perera.

Our next subject is "Non-Medical Underwriting — Modern Concepts." We call this business "non-medical" because the applications are initially considered on the basis of history taken by a lay person. I maintain, however, that it requires discriminating medical judgment to decide which of these cases should be examined and which may be approved on the basis of the original information.

To help us with this problem, we have a Panel, moderated by a real student of the subject — a yachtsman, a skier — the Medical Director of Insurance Medicine of the Equitable Life Assurance Society of the United States, Dr. Whitman M. Reynolds. Whit, will you introduce your Panel?

PANEL DISCUSSION

Non-Medical Underwriting — Modern Concepts

WHITMAN M. REYNOLDS, M. D.
Moderator
Medical Director of Insurance Medicine
Equitable Life Assurance Society of the U. S.

VAN W. GUNTER, M. D.
Medical Director
Jefferson Standard Life Insurance Company

JOHN S. WINDER, M. D.
Associate Medical Director
London Life Insurance Company

MODERATOR REYNOLDS — Thank you very much Dr. Williams. This morning, when I was walking down from Grand Central Station to my office across the street, I saw something which I doubt very many people have seen before.

Apparently, someone had tied the end of a ball of heavy twine to a lamppost while the running part slanted off, out of sight, down the street which was now filling with early morning traffic. I started to follow but was forced back to the sidewalk where, as I walked along, I could catch a glimpse of it only through the gaps between parked cars and slowly moving trucks.

I thought to myself, "Somehow, following this string reminds me of following non-medical applications." Rarely, if ever, are we medical directors the first to see one. More often, they come to our offices in an intermediate stage. Usually, the question is, "Should we decline now, or should we ask for an attending physician's statement?" Later, a case is quite likely to come back again for an interpretation of a pathologist's diagnosis. Not since my early days have I followed a non-medical case from the application phase to the policy.

The theme of the next three papers is the story of non-medical insurance. We will unroll the whole ball of twine and then, in summary, wind it up again. If you have questions after, that will be the time to ask them. Incidentally, when I had walked along that street and around the corner, I came to the driver of a truck who was beginning to wind up the twine. I didn't ask him any questions, but Dr. John Winder, Dr. Van Gunter and I won't mind if you question us.

Medical directors, particularly of companies with large lay underwriting departments, can easily lose sight of the volume of business being written non-medically. Unless one is coping daily with the problems of non-medical selection, it is very easy to become out of touch. For these reasons, in addition to the recent trend toward upping non-medical limits, it should be instructive to hear something about non-medical insurance underwriting problems from representatives of the Jefferson Standard, the London Life and the Equitable Life Assurance Society. During the past year, Dr. Gunter, Dr. Winder and I have exchanged many letters and have met once to coordinate our joint effort.

You will hear first from Dr. Van W. Gunter of the Jefferson Standard Life Insurance Company, Greensboro, North Carolina.

DR. GUNTER — I know many of you here represent companies who have been in the non-medical end of the business much longer than mine. My company began underwriting non-medical insurance in the year 1925. Volume-wise this was, naturally, a very minor part of our business originally, the total amount issued non-medically in 1925 being $2,200,000 or, by number, 1,270 policies. In 1959, we issued 24,348 policies for a total amount of approximately $111,000,000. Non-medical insurance paid for in 1959 amounted to 73 per cent by number and 50 per cent by amount. For the first six months in 1960, these figures amounted to 74 per cent by number and slightly over 50 per cent by amount. By way of comparison, non-medical insurance in force for the company is 62 per cent by number and 45 per cent by amount through 1959. The average size non-medical policy issued in 1925 was $1,333, whereas, this figure for the year 1959 is $4,523.*

*For Comparison:

Average size policy issued (all) 1959 equals $6,860. Average size policy in force (all) through 1959 equals $3,891.

At this time, we have no specific rules for agents concerning the non-medical privilege. In the beginning, it was required that the agent be with the company for a period of at least six months before he was allowed to submit non-medical applications. Later on, this rule was changed so that there was no time element, as such, involved and an agent could qualify to submit applications on a non-medical basis after he reached $100,000 of business in force. Over the years, these rules have been abandoned so that now every agent signing a contract is immediately qualified to submit non-medical business. We do have agency training schools periodically at the home office throughout each year and an effort is made to have all new agents attend at least one of these schools within the first year of his contract. Attempts are made at the schools to educate the agent somewhat in the writing of non-medical business.

Of course, non-medical applications and the information developed in their underwriting are viewed very carefully. Any instances of carelessness or deliberate "cheating" on the part of the agent prompts some action from the agency and underwriting departments.

There are no geographic limitations in the acceptance of non-medical applications. Amount limits and requirements are the same in all the territories in which we do business.

Over the years, non-medical limits have, of course, increased. Just in March of this year, our non-medical limits were again increased so that the company now underwrites up to $20,000 non-medically. (Ages 10 through 30, inclusive.) This figure represents an increase in our own non-medical limits of $12,500 since 1952, just eight short years ago, as at that time $7,500 was the maximum amount issued non-medically.

At the same time, we increased our non-medical limits in March 1960, the fees allowed for examinations were also increased, as has been the case with most companies. To date, we cannot see any evidence of the increased medical fee increasing nor lessening our expenses. It is true that the total amount paid out for examinations has increased slightly but, at the same time, the amount of insurance written has increased rather markedly and it appears, on the basis of business written, the costs will remain about the

same. A closer look at this situation is to be taken at the end of one year.

For several years now, we have accepted certain types of sub-standard business on a non-medical basis issuing rated policies. This is something, of course, with which we must be very careful and watch closely. However, to date our experience has been good. Such cases are handled on the basis of information from the attending physician. Whether or not we accept these individuals without an examination depends almost entirely on the completeness of the attending physician's report. If we feel that the individual is not being seen at regular intervals and is not conscientiously seeking medical attention, or that his physician is not thorough, then an examination is requested. (Incidentally, speaking of the attending physician's report, we adopted the form developed by the Health Insurance Council on May 1, 1960, and so far have been well pleased with it. In our experience, it has been extremely useful in developing complete information.) It has long been our opinion that the attending physician is in a much better position to evaluate the health of these individuals than an examiner who is seeing the individual for the first time and so frequently, I suspect, approaches the situation as just another quick insurance examination. On many of these cases we do not feel too much can be accomplished by requesting an examination at the time of application, and the examination fee saved provides some extra funds for some extra mortality. We do not hesitate, however, to request examinations where we feel that they are necessary.

Inspection reports are used identically as they are for examined business. Inspection reports are requested on all applications for more than $2,500, none being required for amounts less than this.

In underwriting our non-medical applications, no special forms or questionnaires are used. In fact, our company has no special questionnaires except our diabetic questionnaire and, of course, all our diabetic applicants are examined.

Mortality experience has been very good on our non-medical business. Mortality costs per thousand at risk for the year 1959 was $2.80. This figure for the accumulated period from 1925 through 1959 amounts to $3.12. Mortality according to these figures is better on non-medical business than examined business.

Of course, this is misleading due to the non-medical being issued on the younger age groups. When the mortality is broken down, based on age and years of exposure, the medically examined business, of course, shows the best mortality.

As far as claims received are concerned, the ratio runs approximately, medically examined to non-medical business, 3 to 2. In 1959, claim-wise, 46 per cent of all policies paid were issued non-medically and 28 per cent of the total amount paid out for claims was on non-medical issue.

I have a few figures here that might be of interest to this group. From November 11, 1959, to May 11, 1960, a period of six months, I reviewed approximately every case issued non-medically by my company. The total number of cases reviewed amounted to 13,690; 9,886 of these were on individuals 15 years of age or over and 3,804 were on individuals less than 15 years of age. Of these 13,690 cases, a total of 192 examinations were requested and 736 attending physicians' reports were requested. Percentage-wise, 0.76 per cent were rated; .01 per cent were postponed; and .01 per cent declined. Our over-all business ordinarily runs approximately 5 per cent rated cases and slightly less than 2 per cent declined or postponed.

Oddly enough, of the .76 per cent of cases rated, approximately only ¼ of these were rated on the basis of examination, the examination frequently making the individual eligible for standard insurance.

Another interesting fact concerned pregnancy and new borns. It has been a practice of my company for several years to obtain an attending physician's report on our pregnant applicants and, if they have not yet seen a physician, to have them examined and submit a home office specimen. Of the total number of non-medical cases shown above, 105 were on pregnant women; 103 of these had seen physicians and we received favorable attending physicians' reports. Two had not seen physicians and had negative examinations. One applicant who had an extremely small pelvis with a history of two Caesarean sections before was rated Table "B" for a contemplated Caesarean section.

On new born infants, attending physicians' reports are required if the application is submitted within the first 15 days of life,

and 106 such applications were submitted. Attending physicians' reports were obtained on 103 and examinations on 3. These 3 examinations were requested because the agent had not seen the child. The 3 examinations were normal and the insurance issued standard. Of the 103, on which attending physicians' statements were obtained, one case was a Mongoloid and declined; the remainder were issued standard.

Since the development of non-medical life insurance many, many changes have occurred. I suspect that in the future there will be many more changes especially if mortality continues to improve and life expectancy tends to increase. No doubt in the future electronic equipment will be used to some extent in the handling of non-medical applications. This should certainly prove interesting!

In conclusion, I would like to say that, to me, this phase of the business is a very fascinating and interesting one. I believe, however, that the answer to most of our problems in non-medical business lies in the education of the agent in completing the non-medical forms. My experience over the years in dealing with non-medical applications has led me to believe that the majority of our applicants are honest and will give honest answers to the questions if only given the opportunity to do so.

MODERATOR REYNOLDS — Thank you very much, Dr. Gunter, for that fine presentation.

I am sure that now you will be interested in hearing from Dr. John Winder of the London Life Insurance Company, London, Ontario, Canada.

DR. WINDER — Several Canadian life insurance companies began considering non-medical insurance in 1921, and the London Life was one of these.

While a record of non-medical limits of this Company at that time is not available, the 1923 Manual indicates that the Company was prepared to consider $2,000 on any plan but Term, on single females and males from the ages of 21 to 45, provided they were applying within 2 years after being granted insurance with a medical examination.

By 1929, the limit had been increased to $2,500 if the application did not include Income Disability. If the Income Disability

was requested the limit was $1,500. The age group had been made to include single women and men from age 15 to 45 and excluded Term plans, so-called Preferred Whole Life and Joint Insurance.

By 1936, $2,500 was being considered non-medically if no more than $5 per thousand of Income Disability was applied for but the maximum age had been reduced to age 40.

Further liberalization took place in 1949 when $2,500 was granted at age 5 to 14; $5,000 at age 15 to 40, men and single self-supporting women at age 15 to 40 and single non-supporting women $2,500. This trend continued and the first time that non-medical insurance was granted past age 40 was in January 1955, when it was decided to consider $500 up to age 55 and also to grant $500 non-medically to pregnant women. In 1957, the $10,000 non-medical limit was reached at the ages 10 to 30, with proportionate increases in the other age groups.

In December 1957, the present Non-Medical Rules were put into effect:

Ages	4 weeks — 2 years	=	$ 5,000	
	3 years — 9 "	=	15,000	(Not more than $10,000 in a 12-month period)
	10 " — 30 "	=	15,000	
	31 " — 35 "	=	15,000	(Not more than $10,000 in a 12-month period)
	36 " — 40 "	=	15,000	(Not more than $5,000 in a 12-month period)

After a medical examination, additional non-medical insurance could be purchased within the above limits. In January 1959, permission was given to write non-medical insurance of $2,500 up to age 45 and non-medical insurance of $1,000 up to age 50.

In March 1950, the medical examination fee was increased from $5.00 to $6.00; in January 1955, from $6.00 to $7.50 and in December 1958, from $7.50 to $10.00 for the Provinces of Ontario, British Columbia, Nova Scotia and, later, Quebec. This conforms with the provincial tariffs.

The following is the ratio of non-medical insurance based on a sampling of 3,000 issued policies. No record is kept of the number of applications submitted to head office on a non-medical basis.

YEAR	NON-MEDICAL		MEDICAL
1956	58%	—	42%
1957	58.5	—	41.5
1958	61	—	39
1959	72	—	28

The Company's non-medical rules apply in most cases to Orientals, Negroes and Indians not living on reservations.

We have prepared non-medical questionnaires to be used in histories of impairments in the past. They relate to varicose veins, asthma, thyroid disorders and peptic ulcer. There are additional forms of this nature under consideration. Reduced amounts of coverage are granted in certain impairments in the past. The interval of acceptance and amount taken vary directly with the impairment and time elapsed.

Generally speaking, the non-medical questionnaires are used up to our non-medical limits where circumstances indicate they might be suitable. If a moderate rating is required (i.e. — Class A [approximately + 35 per cent mortality] or a temporary rating for 3-4 years) the policy might be issued on this basis without requiring more information by means of an examination.

Some figures covering the London Life mortality experience on medical and non-medical cases underwritten during the past few years are shown below. The mortality table on which the ratio of actual to expected is calculated is the Canadian Association of Actuaries Table covering the experience of 1949-52.

You will note that the male medical experience for durations 1-5 has shown a downward trend, both in number and amount. The male non-medical has shown a similar downward trend for the first 5 years of issue except for a rather high ratio in 1955 and 1956. There has been no comparable trend in the experience for durations of over 5 years.

The figures also show a definite excess in mortality on non-

medical business as compared with medical business during the first five years of issue, but during the sixth and subsequent years, the difference between medical and non-medical business is negligible.

LONDON LIFE MORTALITY EXPERIENCE —
C. A. A. TABLE
Ratios of Actual to Expected

	Policy Years 1-5		Policy Years 6 and Over	
	No.	Amount	No.	Amount
1957-58				
Medical	73.2	67.7	98.2	95.8
Non-Medical	88.6	84.8	97.8	95.3
1956-57				
Medical	78.5	74.4	96.5	95.6
Non-Medical	89.8	86.9	98.9	99.6
1955-56				
Medical	78.8	84.6	98.3	95.2
Non-Medical	101.6	109.1	103.6	96.7
1950-55				
Medical		86.5		
Non-Medical		99.1		

The London Life agents are all full time and must take the two-week intensive training course at head office before entering the field. When they enter the field, they are responsible to the superintendent for one year, so that there is pretty close supervision over their activities. For this reason, all of our agents have the complete non-medical privilege and we have no reason to believe that they have taken unfair advantage of this.

In Canada, the brokerage business is very small compared to the United States. It is only in Ontario and Quebec that we have any amount of brokerage business and these cases are usually large so that the question of non-medical privilege seldom arises. However, any brokerage business we might receive under our

usual non-medical rules would probably be considered the same as our agency business.

Our rules for females are the same as for males in all age groups. In the matter of pregnancy, we will accept up to $5,000 non-medically but we require an attending physician's report if the application is larger than $2,000.

Inspection reports are received on all non-medical applications over $2,000.

Our Waiver and Income Disability Benefits are allowable up to the non-medical limit for life insurance up to a maximum of $10 per thousand.

Guaranteed Insurance Option is accepted in the London Life up to $10,000 with the usual number of options. We are, however, only prepared to go to $5,000 non-medically.

We believe that the limit of non-medical insurance is probably somewhere in the region of $25,000, although we have not reached that limit as yet. This is, of course, only in the most favorable age range.

The London Life has a good staff of medical examiners and the decreased number of medicals, because of changes in the non-medical privilege, might make it very difficult to maintain this staff or procure a high-class examination. This is only one of many factors which are leading us to maintain a *status quo* at our present levels.

MODERATOR REYNOLDS — Thank you very much, Dr. Winder.

There is no trick approach to non-medical selection. What is necessary is the ability to look perceptively at clean cases, almost to the point of hypnosis, and still be able to pick out the ones requiring further study. Extrasensory perception is not a prerequisite, just a fundamental knowledge of underwriting plus hard work.

I will now highlight some features of the Equitable's non-medical insurance business.

Eligibility to sell the Equitable's non-medical insurance contracts is limited to Equitable agents who meet certain training and production requirements. The privilege to sell is contingent on satisfactory performance and may be withdrawn.

Limits of insurance are similar to those of many other companies.

NON-MEDICAL AGE AND AMOUNT LIMITS

Age at Issue	Amount
0-4	$10,000
5-25	25,000
26-30	15,000
31-35	10,000
36-40	5,000
41-45	2,500

SPECIAL NON-MEDICAL TERM LIMIT

15-30	$15,000

Virtually all plans of insurance are available. Features are available.

When we were considering a revision of our non-medical limits Mr. Norman Brodie, one of our actuaries, prepared this very interesting table.

Percentage Extra Mortality for the First 15 Policy Years
That is Offset by Expense Savings of $17 per Policy
After Allowing for 10% Extra Mortality in Years 16 to 20

Issue Age	For a $1,000 Policy	For a $5,000 Policy	For a $10,000 Policy	For a $15,000 Policy	For a $25,000 Policy
		Permanent Plans			
15	296%	57%	27%	17%	9%
20	239	45	21	13	7
25	210	39	17	10	4
30	155	27	11	5	1
35	95	15	5	2	–1
40	59	8	1	–1	–2
45	39	5	0	–1	–2

Seventeen dollars represents the $10 examination fee and, the remainder, other administrative costs. As you perceive, there is a remarkable margin at the younger ages. As amounts and ages increase, the savings are eliminated and ultimately become losses.

In recent years, the amount of non-medical business has been quite stable. The first six months of 1960 reveal the following breakdown by cases and amounts:

Number of Cases	53.6%
Amounts	33.0%

Interestingly enough, the July 1960 figures were:

Number of Cases	58.5%
Amounts	39.0%

These represent almost a 10 per cent increase over July 1959.

It is believed that the reason for the increase is the increased amount limits. For the Society, this is a significant development.

Concerning non-medical mortality ratios, without taking up a great deal of time, about all that needs to be said is that, in the aggregate, they are satisfactory although somewhat higher than that for examined business. Over age 40, non-medical cases must be underwritten with great care.

Because non-medical applicants are young, a disproportionately large number of claims have not been received. As one might expect, claims on medically examined business outnumber the non-medical claims in a ratio of about 3 to 2.

Compared with medically examined business, the number of rescissions effected in a year is relatively the same.

From time to time, we must review our non-medical questionnaires. I am not at all certain that we ask our questions in the best possible manner. Sometimes, changing a word or two will elicit more complete answers to troublesome questions. Every time a form is reprinted, its content and composition should be reviewed.

During an agent's early training, great emphasis should be placed on how to obtain answers to the questions on the medical review blank. Perhaps, the most important idea that should be instilled in the agent is that it will be advantageous to him to ask the questions in such a manner that correct answers will be obtained. In addition, he should be convinced that Home Office personnel have a real interest in whether or not he makes a sale but, unless he establishes a reputation for good medical report-

ing, he will have problems. If he can absorb these things, and transmit them into action, then his future and the future of non-medical insurance will indeed be bright.

It scarcely needs mention that all underwriters should develop a reasonable degree of skepticism and curiosity concerning all applications, then, when an unusual set of circumstances arises, it should be spotted almost instantly and appropriate steps should be initiated. If statements on the application leave doubts, they should receive thoughtful consideration. A recollection for names and past events is most helpful. A knowledge of the area from which trouble may come is one of the best prophylactics that I know. Specifically, learn to know agents and managers; be alert concerning the manner in which applications are presented; verify any peculiarities in dates; consult old papers or records, if they are available; take a second look at applications coming from individuals who, in the past, have caused difficulties. By doing these things, initially, many a problem will be avoided later on.

I would like to illustrate some of these points by reviewing three cases:

Back when we were getting inspections on all cases, we had a report that an applicant had spent a week in a hospital — a fact that was not admitted. Investigation revealed that he had been an in-patient but that there were extenuating circumstances.

He was a bachelor living in a boarding house. Unfortunately, having developed a severe cold with a high fever, he had only his landlady and friends to help him. Then, a blizzard tied up the city, pipes froze and food was in short supply. Even though on the road to recovery, he decided to move into a hospital to convalesce. Better questioning and, perhaps, less editing on the part of the agent, undoubtedly, was what was needed here.

A $5,000 application was referred to the Home Office where an observant underwriter noticed that it was dated in April, but did not get to the Home Office until June. Instead of issuing immediately to avoid further delay, he asked the agency where it had been. During the investigation, it was learned that the applicant had developed leukemia. The case was withdrawn.

It was noticed that a very active non-medical underwriter had submitted 10 clean applications dated on the same day. Knowing

the agent's habit of soliciting industrial workers, we were not unduly alarmed, but when someone remembered that he usually worked the noon hour, a further investigation was made. Two of his applicants had poor attendance records. They turned out to be rheumatic cardiacs.

We have found that when an applicant gives an exact diagnosis, such as pneumococcic meningitis, or adenofibroma, or basal cell carcinoma, for example, he is telling the truth but, if he uses vague terms such as mass, tumor, non-malignant swelling, an investigation should be made. Either he doesn't know, or he is shading the truth.

With older non-medical applicants, concerning whom the MIB section indicates "No Report," check again — sometimes reports are delayed, misfiled, or are found under the same name but with a different spelling.

Needless to say, we try to avoid having to request a medical examination when one is not needed. Sometimes, an attending physician's statement will supply the missing facts and permit an issue. Recently, we have been working on a series of special letters to be completed by applicants. These cover conditions such as headaches, head injuries where the period of unconsciousness is short, certain types of tumors, varicose veins, hemorrhoids, inguinal hernia, hydrocele, total deafness, total blindness, sacroiliac sprain or strain, and others. Where this program will lead us I cannot say, but I know others consider the idea worthwhile and I have few serious doubts.

Non-medical substandard insurance is a new development with ELAS and our experience is limited. It does seem that in certain surgical conditions requiring single extras, where small amounts are involved, a complete attending physician's statement might well replace a less informative medical examination.

These themes can be echoed in an infinite variety of settings. A more complete understanding on the part of the field force and underwriters, as well, will help to bring them into focus.

In spite of problems, it is apparent that non-medical insurance is here to stay and that it will grow in importance to us all.

Now, gentlemen, if you have any questions to direct to the various members of the Panel, I shall be glad to entertain them.

QUESTION — Dr. Gunter, do I understand correctly that you obtained only 700 attending physician statements out of 13,000 cases?

DR. GUNTER — Yes, that's right; in a six-month period of time.

DR. ROBERT A. GOODELL [Phoenix Mutual, Hartford] — This is a subject that interests me very much, having been 30 years now with a company, which, during all that period, has accepted over 50 per cent by number on a non-medical basis. There are just two points that I want to make.

Has the Panel given consideration to what seems to me an important point; that is, as more and more companies enter this field and increase the amount, and the percentage of their business climbs to about 50 per cent, we get less and less information, there are fewer impairments reported to the Bureau and, therefore, as time goes on, the Bureau will be less protection to us; at least, it seems reasonable to me.

I was also interested in your speaking of disciplining an agent who didn't do quite right. I have had some experience along this line. The last one I disciplined was promoted to agency supervisor.

MODERATOR REYNOLDS — Your idea about the MIB reports is a novel one. It is conceivable, if all companies embarked on this program, there might be a lessening in the number of impairments reported. How many this would amount to is a conjecture. I don't believe there would be too many, because most of these young non-medical applicants are fairly healthy. I don't believe that we'll worry about your concerns, although we'll keep them in the back of our minds.

DR. GOODELL — On another point, I just thought if, as has been admitted by the Panel, we used the attending physician's statement to evaluate risk, there is some justification for the attending physician's feeling that he should get a reasonably large fee for his opinion.

DR. KARL W. ANDERSON [Northwestern National, Minneapolis] Would you explain a little about your non-medical substandard ratings, how high you go, and a little about your rules concerning them?

DR. GUNTER — All those are referred to the medical director. We work with the underwriter on them. We have no specific rules on them; it's just a matter of consideration. So far, the highest we have gone is 250 per cent. We did go to 250 per cent, and on a few, 100 per cent. We try to stop most of them at 200 per cent.

QUESTION — Dr. Reynolds, how high do you go on substandards?

MODERATOR REYNOLDS — We're playing it by ear, too. We have taken so few of them. I don't believe we have ever gone higher than 150 to 175 per cent. There have been occasional cases where we put on a single charge of $5.00, which would be roughly in the 137-150 per cent area.

QUESTION — I would like to ask a question about the use of attending physician's statement as the basis for evaluation. To give an example, in a fairly substantial case, say, $15,000, where you do not seek an examination but you wish an attending physician's statement, obviously, if you get it, you may be in very good shape. But, suppose, two or three weeks later, you have had no answer; what do you do then?

DR. GUNTER — What we do is to follow them up in 10 days, then wait another week, and if we don't get an answer from him, we write a personal letter. If we don't get an answer pretty quickly, we telephone him. Fortunately, we get an answer back on the average in about 7 days.

QUESTION — One more question. About those letters you write to the applicant, does your agent object?

MODERATOR REYNOLDS — So far, we have had no objections.

QUESTION — Have you had any repercussions on the part of general practitioners or clinicians about taking action on what is given without any examination? Suppose, for example, you had an applicant with a congenital heart, or some other abnormality, and the general practitioner or clinician told you about it, and you rated the applicant who knows he didn't have an examination; do you have any repercussions from the gentleman examined by the practitioner?

MODERATOR REYNOLDS — We never have.

DR. GARNER — We have had patients with insurance problems who talked to me about them. Information given by patients, who are applicants for non-medical insurance, to an attending physician which is subsequently sent by them in confidence to insurance companies may be disruptive of good doctor-patient relations. Physicians, not generally familiar with non-medical insurance, think that insurance companies should develop this information themselves through their own examiners.

Personally, I like to avoid misunderstandings and, for this reason, I have been getting examinations even if it means going to extra expense. In this way, when I correspond with an attending physician and an examiner, I keep it in the family and my underwriting action is based of the results of an examination that is made by one of our examiners.

DR. GUNTER — Dave, we have never had any similar problem. Of course, we know that doctors don't want us to reveal their confidential information and we never do. So far, we have not had any complaints, even pertaining to our medical examination. The applicants don't come back to us to complain; they always complain to the family doctor.

MODERATOR REYNOLDS — As far as we are concerned, we have never taken a case on the basis of the attending physician's statement, where the man had not pretty well admitted what was wrong with him in the first place. I believe that I would have called for an examination in the cases you have indicated.

DR. C. MARSHALL LEE, JR. [John Hancock, Boston] — I was going to ask the same question that Dr. Garner asked, about taking some of the onus off the statement so that the applicant admits or we go back and examine, so we don't put him on the spot.

MODERATOR REYNOLDS — I'm pretty sure that's the proper way to do it.

DR. D. SERGEANT PEPPER [Connecticut Mutual, Hartford] — I was about to say the same thing. I don't think there is any difference in interpreting the personal physician's statement from the point of view of whether it is a consultation or whether it is a request for facts. For the purpose of the record, I think, we are asking for facts and not for a consultation. I don't

think it makes very much difference whether it is non-medical or medical.

MODERATOR REYNOLDS — Are there any other questions? If not, thank you very much.

PRESIDENT WILLIAMS — Thank you very much, Dr. Reynolds, Dr. Gunter, and Dr. Winder.

Gentlemen, may I have the hands of those who have been in the insurance business in the thirties? How many of you were? I am sure that you will understand the problem of the disability decision. It was during that time that those of us who were in the game had major problems with the income disability that was written just before the big depression. Since, at the present time, the Social Security Bureau has the largest disability problem of any organization in this country, we have as our guest today, Dr. William Roemmich, who is Chief Medical Consultant of the Division of Disability Operations, Bureau of Old Age and Survivors Insurance, Baltimore, Maryland. He has two guests with him, whom I ask that he introduce. Before we review the motion picture, "The Disability Decision," produced by the Department of Health, Education and Welfare, Social Security Administration, Bureau of Old Age and Survivors Insurance, in cooperation with the American Medical Association, I am going to ask Dr. Roemmich to give you a few remarks about it. Dr. Roemmich.

THE DISABILITY DECISION

WILLIAM ROEMMICH, M. D.
Chief Medical Consultant

Division of Disability Operations
Bureau of Old Age and Survivors Insurance
Baltimore, Maryland

I thought that I might say, before showing this film, that there are references made in it to state agencies and district offices. Sometimes, unless you are familiar with the caseflow, you may miss some of the points that are made in the film.

When the disability program was organized in the Bureau of Old Age and Survivors Insurance and became part of the law in 1954, it was understood that the Bureau of Old Age and Survivors Insurance would contract with state agencies for making the initial decisions. The Bureau of Old Age and Survivors Insurance is a policymaking group and reviews the state decisions. But, although we may reverse an allowance, we in the Bureau may not reverse a state agency's denial. Although the state agencies have been very charming and co-operative and, frequently, at our suggestion, they do make this change.

Just briefly, when a man who is insured under the Bureau of Old Age and Survivors Insurance makes an application for disability, he goes to one of over 580 district offices throughout the country, where he files an application. He also tells the district office who his attending physician was, or the hospital in which the impairment or the disease which causes his disability was treated. The district office then sends out inquiries and collects as much data as possible. Most of this, as you know, comes, therefore, from many attending physicians.

When this material, the evidence, is collected, it goes to the state agency where, if the evidence is sufficient, they make the decision and the case is then sent to Baltimore for effectuation and payment, or for review and return to the state agencies.

The state agency, if there is not enough evidence to make the decision, may go out and develop additional evidence and,

usually, they will contact physicians and institutions to develop evidence in more detail. They may also, as you know, purchase consultative examinations at the Bureau's expense.

All the evidence comes from 160,000 practicing physicians. Some of the evidence is factual opinion evidence and some is unsupported by clinical data. When the records have a bare conclusion, without individual data or facts that support the conclusion, which usually is a diagnostic, prognostic, or a functional one, we need to develop additional information. It is very difficult to do much with raw opinion coming from such a large group of physicians. We need evidence which will substantiate the opinion. The Bureau's biggest problem has been in collecting the data that enables the state agency and the Bureau to make proper and equitable decisions. We hope this film will help us arrive at a mutual understanding as to the type of reports that are most helpful.

The physicians have said to us, "If we knew what kind of evidence you need, we would be delighted to give it to you." So, the American Medical Association, on the advice of the Bureau's Medical Advisory Committee, which includes nationally known physicians from all over the country, suggested that we get together with the AMA and produce some informational medium. They decided that this medium should be a film that would be available to all physicians.

The film is a sort of subtle presentation of the type of insufficient evidence we usually receive, and evidence as we would like to receive. You have to pay close attention to catch that.

After the film has been shown, Mr. Borgen, who is from the Bureau of Old Age and Survivors Insurance, and Dr. Joseph Oliva, who is the Chief Medical Consultant for the State of New York, and Mr. Roy Curtis, Director of the New York Disability program, will be available to answer any questions that you may have about the film.

[Showing of film, "The Disability Decision."]

PRESIDENT WILLIAMS — We are indebted to Dr. Roemmich for bringing this picture to us. Do you have any questions that you would like to ask him, or any remarks that you would like to make?

QUESTION — Are there any copies of the current disability form available?

DR. ROEMMICH — There are none here right now, but we could have some available for distribution later in the day or tomorrow. As you noted from the film, we haven't found the right form. I think it is much more important that the physician knows what to report. I have frequently made the statement that the form is really secondary. If the physician knows what we want — and you can see by the film that we want only those things which he uses in his clinical, diagnostic and therapeutic practice — then things will go smoothly. He can send us the information on, if you will pardon me, toilet paper, which can be white, blue or pink. The important thing is that all the evidence, rather than conclusions, is submitted and that all his functional limitations are described.

DR. REYNOLDS — I would like to ask if the physician does this as a public service or is he remunerated for filling out these forms?

DR. ROEMMICH — The American Medical Association, in its testimony, indicated that the Bureau should not pay for the original report, that this was between the doctor and his patient, and they did not want to have a third party involved. Consequently, this is not done.

I would like to invite Mr. Borgen to make a very brief comment on this very problem, about why we do not pay for the original report. We do pay if we buy additional information but not for the original report.

MR. BORGEN — The basic position, with respect to claims against the government, is that it is somewhat improper for a government agency to help an individual make a claim against the government, that is, help him to a certain point. The Bureau of Old Age and Survivors Insurance prides itself on the service aspect that it provides for claimants in helping them submit information necessary to establish their cases. The point at which we stop in the initial development of a case, is the point of purchasing the record.

However, when an individual has submitted evidence which establishes a reasonable likelihood that he has a valid claim, or if there is need for verification or reconciliation of conflicting evidence, the program does permit the state agency and es-

pecially the physician in the state agency to purchase or authorize the purchase of the type of evidence which he feels is necessary, in addition to the evidence submitted by the individual. At that point, the evidence, the record, the laboratory tests, the additional examination that may be necessary are obtained at the expense of the Social Security Administration.

I hope that answers the question.

DR. REYNOLDS — I would like to ask just one further question. Is there a fee schedule, or do you have a set fee? How is that worked out?

DR. ROEMMICH — As you heard, when we buy the examination, it is purchased through the state agency. In our contractual agreement with the state agency, they use the fee schedule that is operational in the state agency. Mr. Roy Curtis from the State of New York is sitting right here. There are fee schedules, but those are state agency fee schedules and are available to physicians through state agencies. Is that right, Roy?

MR. CURTIS —Yes.

DR. LEOPOLD MORISSETTE [La Prevoyance Compagnie d'Assurance, Montreal] — We frequently find ourselves in a position where a patient has coronary insufficiency and there is, perhaps, no objective evidence, such as an abnormal exercise test, to support this. If the patient does not work, regardless of his capacity for activity, and we actually get into litigation over disability claims of this type, if he has such an illness supported by his physician, we always lose if we contest it. In other words, it doesn't matter what the man can do, if he actually has this supported diagnosis and if he actually is tested through a court, we lose. What is the position of the agency in this type of case?

DR. ROEMMICH — I think I'll pass that one to Mr. Borgen.

MR. BORGEN — We don't always lose. We lose a little more frequently than we like to, however, and this problem of, you might say, interdisciplinary approach that is involved in disability evaluation and in the testing of decisions of disability in the courts is a toughie. We don't have it licked. We are still struggling and hoping to establish the rationale, or rationality, for our position, at least on the significance of evidence, the types of evidence, and

the evaluation of evidence in relation to a concept of disability. We are trying to establish the philosophy, the rationale, the legal precedent and soundness for our position in a way which will recommend itself to the judiciary.

Incidentally, all our cases are heard initially in federal district courts. They are not heard in the state courts. We haven't had any Supreme Court decisions. We have had, I believe, four federal courts of appeal decisions. The score and the way the decisions come out are such as to keep our optimism alive.

The concept of disability, as distinguished from mere diagnosis, seems to be acceptable to the courts with respect to our program.

DR. ROEMMICH — If the evidence shows that an applicant has hypertensive cardiovascular disease, or arteriosclerotic disease, and has coronary insufficiency, despite treatment, as you indicate, with electrocardiographic findings, we do not contest it very often. If, for instance, a man has pain on mild exertion, he is classified, say, 3-C, and the electrocardiographic evidence is substantiated, we do not contest such a case. We like to look at the tracing to see if there are any significant changes that suggest coronary insufficiency. The evaluation is, however, based on total evidence.

DR. ALBERT L. LARSON [Travelers, Hartford] — I think we should make it clear here, and I believe I am correct in stating, that the position taken by the government in regard to obtaining proof of disability is exactly the position taken by the insurance industry in any claim against them. I understand that this position or this policy is supported by the American Medical Association. I know Bill McBurney is here today and he might elaborate on that statement, or corroborate it. I think it should be made clear that we agree exactly with the position taken by your agency. It is the position of the insurance industry.

MR. WILLIAM MCBURNEY — I would be glad to corroborate it. That is the position of the industry, that we do not pay for proof of disability, and we have indicated on all standard forms that the expense of the form is to be borne by the patient. The Social Security Administration does pay for examinations, and so do we.

I want to make one additional comment to the credit of these people. When they worked up this film, they did consult with

the industry through the Health Insurance Council, for which we were very grateful.

QUESTION — How can anyone expect to prove whether a man actually has coronary symptoms, that is, if a man does or does not have pain on mild exertion?

DR. ROEMMICH — As you know, the medical profession has no way of measuring pain. The Bureau of Old Age and Survivors Insurance has not found a method to measure pain. Pain, dyspnea, nervousness, these subjective symptoms, we measure the same as you measure them in medicine. We simply pile coincidence on coincidence and the more coincidences we have, the more reasonable it becomes that this man has pain. If a man has all the classical history of pain, its origin, its ramifications, its association with the vicissitudes of living and if, then, you add to that some physical findings or some electrophysiological findings on the electrocardiogram, this still does not prove that he has pain. You, as physicians, all know, there are all these findings, electrophysiology and electrocardiographic, except for the history of course, may exist. If there is no pain, we assume that they do not allege. It is merely a piling up of the historical facts, the classical history and, especially, a statement that the applicant makes before he has any intention of collecting insurance. These statements are very important.

I heard a discussion just a week ago by Dr. Burchell, who, as you know, is Chief Cardiologist at Mayo's. He said, in claims, it is very important to get a first statement; that is a statement that an applicant makes before he makes a claim, because we cannot prove or disprove pain. We merely say, there are the biological precedent events, or, a classical, historical symptomatology, with some physical findings and electrocardiographic findings, and then the pain alleged on mild exertion is reasonable. That is all we can do.

DR. ENGEL — Have you attempted to make a list and define conditions that are totally disabling? Have you used automatic data-processing equipment for coding your medical information and for processing or for retrieval from the records?

DR. ROEMMICH — The question is whether we have established some guides or standards which we say are disabling. Yes, we

have electronic facilities for medical data-processing. We have not tried to program for a computer decision.

Our guides are confidential at the present time. They are placed as guides in an Operating Manual. We are beginning to make some of them public now in a general way. For instance, regulations are published which spell out the level that we think the Congress intended; that is, the biological level at which a man should be paid disability. In addition to that, we are coming out with some new regulations that spell out the type of evidence that is acceptable and is not acceptable in evaluating these cases.

MR. MCBURNEY — The suggestion was made that you had these medical data on cards, IBM, presumably, or tape. Do you do any of your medical evaluation on the computer?

DR. ROEMMICH — No.

MR. BORGEN — Do you know a way to do that?

DR. ROEMMICH — Some of us have dreamed about it and we think there is a possibility that this could be done. It is theoretically possible, perhaps, to process this electronically.

PRESIDENT WILLIAMS — I want to thank Dr. Roemmich, Mr. Borgen and Dr. Oliva for being with us.

I would like to deviate from the program here for just a minute. You know, this Organization and the Medical Section of the American Life Convention have almost identical membership now.. But is has not always been so. The Medical Section, as its name implies, is a component of a large insurance trade association with headquarters in Chicago. This Organization has, in the past, in its early days, been centered in the East and has been an independent association. It has, though, been associated by tradition with a group of companies which, at one time, formed what was known as the Association of Life Insurance Presidents. Its successor is the Life Insurance Association of America. We are very fortunate to have with us the Chief Executive Officer of that Association today, Mr. Bruce Shepherd, Executive Vice-President of the Life Insurance Association of America. He is one of the famous Shepherd family of actuaries. Mr. Shepherd!

MR. BRUCE E. SHEPHERD — Thank you, Dr. Williams. I will interrupt your proceedings for just a minute, to express our

appreciation for the wonderful help that your Organization and you as individuals have given us in our duties in the Health Council Organization. You are a member of it and your Organization is a member of it, as we are.

As you probably know, we don't have any doctors on our staff. We rely on you fellows. We're a little like the village ne'er-do-well whose position in society was in some doubt. His son was being queried by one of the neighborhood children, without much enlightenment. The boy finally said, "Well, what does your father do? Is he a policeman?" The son said, "No, he's not a policeman, but he often goes with one." That's the way we are.

This Health Council activity is getting to be pretty big business. It's putting a strain on our budget today and on the budget of the Health Insurance Association and a few of the other member organizations of the Health Insurance Council. It is running pretty close to a half million dollars a year. That, of course, does not include all the voluntary work, so to speak, that fellows like yourselves contribute to the work that is being done. I think we are making a lot of progress. I just wanted to thank you for your help, and to express the hope that you will have a very successful meeting.

PRESIDENT WILLIAMS — Thank you very much. I have a friend who has a young daughter in the teenage class who is a little overweight. Her mother decided it was about time she was slimmed down since she was the age when her appearance was beginning to get important. So she called her in to have a heart-to-heart talk with her. Pretty soon, the daughter realized what was said and replied, "Wait a minute, Mother. I know what the problem is. I'll lose weight when it's necessary but, right now, I don't want to lose weight. You know, I have the best nickname in my class." The mother asked, "Why, what is that?" and she said, "It's Fatscination."

Our next subject is a "fatscinating" one and it is to be given by a speaker who can speak in a fascinating fashion. Just as hypertensive disease involves more than the level of blood pressure, so obesity concerns more than height and weight. Our speaker has been a student of the metabolic processes and of nutrition

for many years and is well qualified to speak on this subject. He is, in fact, qualified to talk on many subjects, as his interests are broad. Very few medical programs in my section of the country are completed without making an attempt to include him. In spite of his heavy duties as Chief of Medicine and his participation in medical programs, I am told that he finds time to lecture on the great books to undergraduate students. Last week, he gave a major address on the "Medical Implications of Population Explosion." His medical career includes graduation in the same class at Physicians and Surgeons with Dr. Perera, internship at the Presbyterian, further experience and service at the Massachusetts General Hospital, Johns Hopkins and Tulane. Since 1949, he has been Professor of Medicine and Chairman of the Department of Medicine at the University of Virginia.

I take pleasure in introducing to you Dr. William Parson.

OBESITY — FROM MAN TO MOUSE AND BACK AGAIN

WILLIAM PARSON, M. D.
Professor of Medicine and Chairman
Department of Medicine, University of Virginia
Charlottesville

I am very pleased that this talk was moved upstairs. Last night, I kept thinking that if I had to talk where the bar was, many of you would close your eyes in fantasy. You do remember the bar downstairs, don't you?

Our last speech ended with the idea that the form was not important. This is a good theme on which to begin. Just how important is the form? And what is the essence of the problem?

My interest in history goes back very far, as you will see from

The Venus of Willendorf
Paleolithic Period, circa 20,000 B.C.
Royal Museum of Vienna

Fig. 1

the first picture. This (figure 1) is the Venus of Willendorf. She goes back 20,000 years. There were fat people then. Presumably, there wasn't too much to eat then. There may very well have been psychological problems then. Vincent Dahl at Rockefeller told me, one day, that he was interested in paleontological obesity. She is the goddess of our group. There are only two of us who are interested in this particular field at the moment. He thinks she has an endocrine disorder, and I say there isn't very much evidence to go on now. I don't know what the OASI would do with the type of information we have here.

This is a sort of historical review. The problem goes back to antiquity. This (figure 2) brings us to the more esthetic aspect

Fig. 2

of the problem. I think you should study it. It is another Venus. This is Ruben's girl. I chose her for an extraordinary purpose, to begin with, my mind has now changed. The original purpose was to show you what extraordinary ideas of beauty people have had in the past. As you walk around the streets of New York

and see all the slim things, you know that they would be very unhappy to have a figure like this. I chose this to show how our ideas have changed. But the extraordinary thing is that my ideas have changed once again, as I use this illustration.

That is one aspect of showing the picture. The other aspect is to remind you that we don't really know what obesity is. We know that it is an excessive amount of fat deposition. We know, when it is properly distributed, it is not too upsetting. On the other hand, we have to use various techniques for measuring the

Aga Khan, at 75, to Get His Weight in Platinum

By The Associated Press.

KARACHI, Pakistan, Jan. 13 —Followers of the Aga Khan, rotund leader of the Ismaili Moslem sect, decided today to give his weight in platinum on his seventy-fifth birthday Jan. 22.

At last reports, the Aga Khan weighed about 240 pounds and if the price of platinum doesn't change much this week he'll net around $3,000,000. He will receive the cash, not the platinum, and probably will give it to charity.

The Aga Khan arrived here from Nice, France, today with his Begum for a two-week's stay.

On the silver jubilee of his Ismaili leadership he received his weight in silver, on the golden jubilee in gold and on the anniversary five years ago in diamonds, $2,500,000 worth. Last June the Aga Khan's followers decided to use platinum for this seventieth year of his reign.

Fig. 3

amount of fat, and, you know, Admiral Behncke went under water to measure specific gravity and tried to get some idea of the actual total amount of body fat that goes into saying a certain person is overweight. We know techniques using body water have been explored. The fact is that we don't know from a physiological point of view how much is the right amount.

From the esthetic point of view, our ideas change. Have you studied this picture long enough? This clipping (figure 3) shows you that there are cultural problems to this subject that vary from area to area. This, of course, seems a little fantastic, to think that people equate weight and strength and power and such, and, yet, the psychiatrists tell us that fat people do have extraordinary fantasies in which their weight is equated with importance and power and such.

This (figure 4) is your homework, the stuff you work with. This is a graph that I made of some data from the patients who were uprated, for instance, because they were 20 per cent higher than your ideal body weights. This is what they die of, when

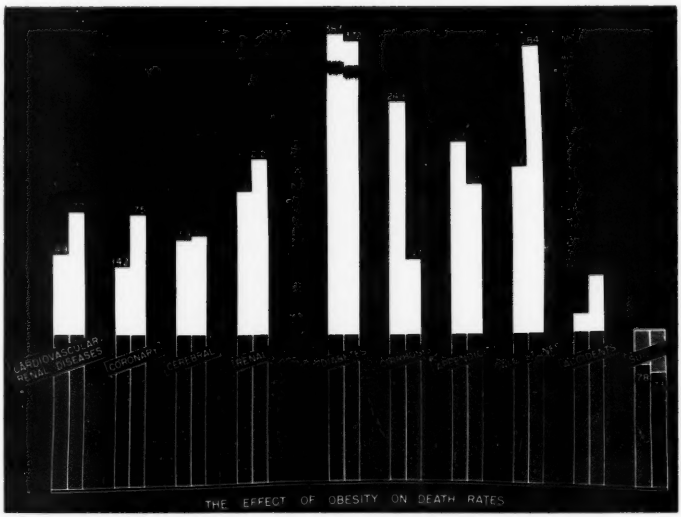


Fig. 4

you study the results 25 years or so later. You know, these are the so-called degenerative diseases, and such things as diabetes and cirrhosis and various operative procedures are included. One of the intriguing things is that suicides occur significantly less in fat people than they do in people of normal weight.

Now, I have run through this very quickly and perhaps a little too glibly, but the problem is there. We have been faced with the problem of knowing what is the significance of overweight. Your work in the insurance world has clarified for us that it is not healthy to be overweight. The question was raised a number of years ago, "Is there any good evidence that losing weight will improve the life expectancy of these people?" As you know, a group of people who did lose weight down to the ideal body weight were then given the normal insurance rate, and it was found that their expected death rate was improved over the death rate of this group of people who were overweight.

The question was then asked, "Do you really know that these people who lost weight stayed down?" and the answer is, "No, we don't." If there is any clinical evidence to bring to bear here, it is that people who have been fat and lost weight tend to regain their weight.

"Is it possible that people who are able to lose weight under the inducement of better insurance rates are different from other fat people?" Of course, this is, at the moment, a question to which we would love to have an answer.

However, now, bringing all of this together, it is not really considered esthetic to be fat, it is not as "fatscinating" as we would have it for a girl to be taunted with being fat. You don't get paid off in diamonds, and your insurance rates go up, and the question is, "Why in the world would anybody want to be fat?" The answer must be, in most cases, that they can't help it.

Then, we say, "Well, why can't they help it?" We say, "Well, I suppose, they just love to eat, and it means so much to them." There has been a period in the field of obesity wherein the psychiatrists have been out in front. I must confess to you that I have been talking about this subject for a number of years, and a few years ago I was an honored speaker, so to speak, among psychiatrists, because I took the party line, and I would be embar-

rassed to be in front of them today because, once again, I have changed my mind on the subject.

The psychiatric approach to the problem, however, is certainly an intriguing one. It is a seductive one, if I may use a psychiatric term. What is more simple, more reasonable, than to visualize yourself cold and hungry, with wet pants, and deserted, and then to be taken, if you will bear with me for a moment, to the breast and cuddled and warmed and fed? What happier experience was there in infancy? Is it unreasonable, the psychiatrists suggest, that when you are cold and hungry and deserted and your pants, figuratively speaking, are wet, and you are alone, is it unreasonable that food then begins to stand for more than putting something in your stomach, that it stands for love and affection and security and warmth and has with it a great deal of reassurance in this troubled world? A, it is so reasonable, and, B, it is such a common experience that people who are overweight and who are then put on diets become hellions and impossible to live with.

When you see here that suicide is less frequent among people who are fat, it brings to mind that there is a terrible study suggesting that restrictive diets have brought on serious depressions and suicide attempts in some cases. I remember so well a woman who came to the clinic for some reason. I said, "While you're in the hospital, we'll put you on a diet." She bared her teeth at me and said, "Oh, no, you won't!" I said, "Why not?" and she answered, "Because I like to eat."

Hostility, an extraordinary complex business, is tied in with the eating pattern. The psychiatrists, as I say, have had something of a heyday in calling to our attention and reminding us of the fact that the body function, as necessary for life as this, is tied in with all other sorts of emotional experiences.

But we have not been very successful. I have been calling on psychiatrists for a number of years to help in this problem and I have used all sorts of supportive devices. I have said many times that the problem is not to try to change the diet, but in some fashion to reeducate the patient; that the problem is the patient's eating to satisfy other needs, that this is neurotic behavior and, perhaps, if we can understand our patients better, we can resolve some of the conflicts. Perhaps we can work it out.

This cartoon (figure 5) illustrates the frustration that goes with this. The point is that this whole psychological approach has been made fun of in our comic strips and so forth. Well, this is not the answer. But I think our whole culture is troubled by whether or not we are on the right track in this regard, because practically every fat person, or not every one but many fat people, will tell you, "There must be something very special in my case, because I don't eat that much."

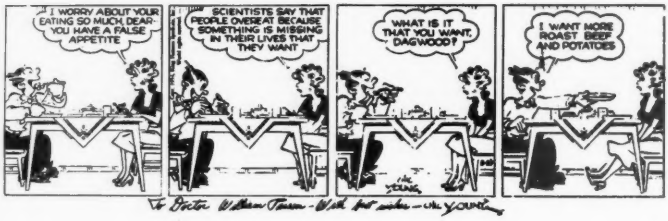

I WORRY ABOUT YOUR EATING SO MUCH, DEAR- YOU HAVE A FALSE APPETITE
SCIENTISTS SAY THAT PEOPLE OVEREAT BECAUSE SOMETHING IS MISSING IN THEIR LIVES THAT THEY WANT
WHAT IS IT THAT YOU WANT, DAGWOOD?
I WANT MORE ROAST BEEF AND POTATOES

Fig. 5

We haven't really paid much credence to this claim. Whenever we have attempted to study the problem, it looked to us as though Newberg was right, some 40 years ago or so, when he studied the metabolism of fat people and couldn't find any difference from that of thin people. But, maybe, the techniques weren't so good; maybe, they were studying the wrong things.

Because of our clinical despair, because the prognosis in people who are overweight and who are put on a diet is just about as bad as treatment for cancer of the breast or something of that sort, we felt we had to go elsewhere to work out answers, and so we turned to the mouse.

You can see (figure 6) that one of these girls is fat, and she is fat because we gave her gold thioglucose, the same thing that is sometimes used to treat arthritis. It was discovered by a very intelligent investigator at the National Institutes of Health, George Brecher, when he was studying toxicity of gold compounds. When he gave an LD-50 dose (meaning a dose that will kill half the mice), if he watched the other half, the surviving half, about half of those became fat. This was a very simple way to produce experimental obesity. It turned out, after a while, that these

Fig. 6

animals got fat because they had damage to the hypothalamus, a very selective type of damage.

This graph (figure 7) shows you the type of study we have done through the years. First, ignore the upper lines in each half of the graph and look only at the lines starting at 12 and 28 (the Control Mice), because these lines have in them one of the greatest and most exciting secrets of living things; namely, the evidence of homeostatic wisdom in the animal. The upper line, at 28, is the average of weights of a dozen or so mice. We have done this many times. You see that this line jiggles and jaggles but tends to remain fairly straight across the graph.

The vertical lines tell you that, at various times, we have changed the diet of these mice. We have gone from a freely

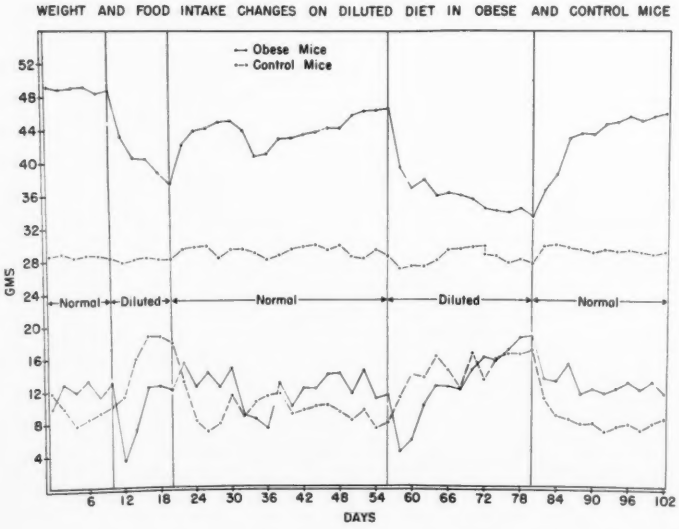


Fig. 7

selected, groundup chow diet to a diet in which 50 per cent was diluted with kaolin an inert material. The extraordinary thing is that the weight of these animals did not change significantly.

If you look at the other line, starting at 12, you will see the average intake of food. You see that these animals were wise enough, when the diet was diluted 50 per cent, to increase the volume of food some 50 per cent; and so they adjusted to this diluted diet and were able to maintain their body weight. Then, when the diet went back to the original diet, once again, they cut down to the original quantity of intake. When we refooled them, or attempted to fool them once again, with diluted diet, once again they made the adjustment. This is homeostatic wisdom; this is the wisdom of the body, and this is the thing the fat man wishes he had; namely, the ability to know how much to eat, the right amount to eat. It is in searching for some sense of how this works and where it goes wrong that we are concerned. This is truly the key problem.

If you look at the other (Obese Mice) line, you will see that the weights, to begin with, are very high. These are a dozen or so of our fat girls who have had damage to the hypothalamus. The extraordinary thing that you will notice here is that, when they were put on the diluted diet, they actually did not increase their food intake. They decreased their food intake. This is an extraordinary thing and it seems somewhat of a paradox; namely, that the fat mice were unable to handle the diluted diet. They cut down their intake and they did not maintain their weight when they were offered the diluted diet. This did not make very good sense.

This (figure 8) is a type of study which was patterned after a study which the biologists have done for many years; namely, to

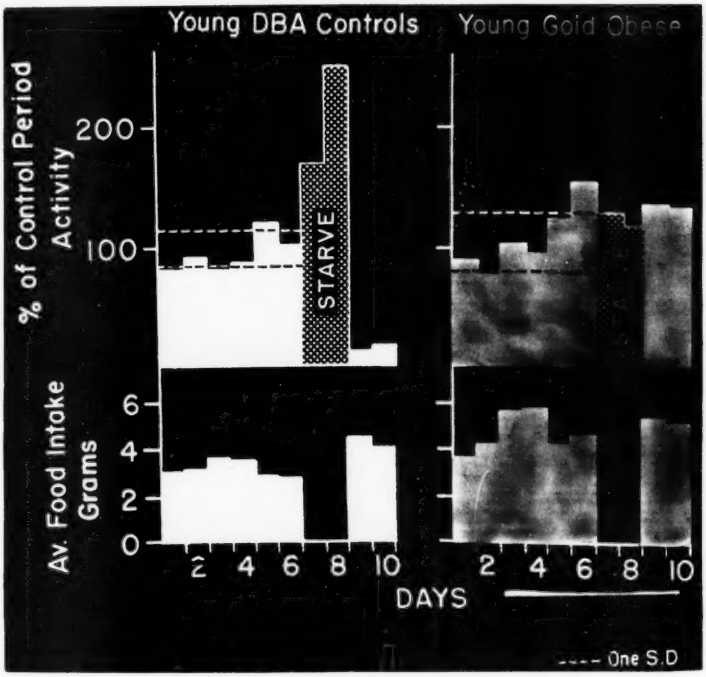


Fig. 8

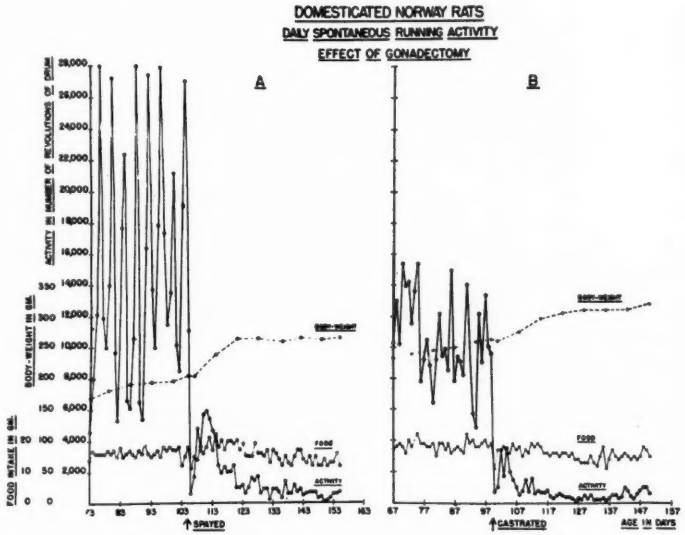
put an animal in a revolving cage and let him run as much as he wants to and then measure the number of rotations in this so-called squirrel-type cage. What we find here is that, if we establish a base line of some five or six days of running activity, and then starve the animal, as shown in the left part of the graph, normal animals will increase their running activity up to 150 to 200 per cent of base line and then, after they are refed, their activity will fall very low.

This, again, is an extraordinary business that seems to run through all animal species, and it is one reason why we rather lecture before lunch than after lunch. There is a very real physiological pattern that runs through the animal kingdom, a slowing down of activity after the animal has been fed, and a restlessness, an increased activity, when the animal is hungry.

Perhaps, this might give a little insight into the psychiatric concept I mentioned before; namely, that restlessness is, in fact, relieved by feeding. This is not purely on a psychological basis. This has a physiological manifestation to it as well.

Would you like to know what happened to the animals that had damage to the hypothalamus? When they were starved, they did not increase their activity; when they were refed, they did not decrease it. In other words, by damaging the hypothalamus, we have disturbed the homeostatic pattern of response, first, in the ability to eat the right amount and, second, in the increased activity that goes with food deprivation and the decreased activity that goes with refeeding.

This (figure 9) brings together some studies that Dr. Curt Richter did at Johns Hopkins a couple of years ago, in which he showed that the activity pattern of animals is altered by castration. I put this in partly to tell you that these are domesticated Norway rats. It is very interesting to note that the wild rats' activity, which is not shown on this slide, that is, the activity measured in these revolutions of the drum, is not the same. The wild rat does not behave this way when he is castrated. It is an interesting sociological note that the domestic rat is more geared to his testicular function. The wild rat does not have this luxurious outlook on life. He is dependent so much on his adrenals for survival that he still has to keep running, even when he doesn't



Typical graphs showing the effects produced by gonadectomy in domesticated Norway rats: A) female; B) male.

Fig. 9

have the sort of things that you do in mind when you have your testicles present. It was difficult to get that out in a clean, wholesome fashion!

This (figure 10) shows you some studies that we did just to answer the old "bull session" type of question, "Which is more important?" This, by way of a digression, I might say, I just couldn't resist putting in these illustrations. If you start with an animal, the activity goes up, in the first dotted part, and on refeeding, it goes down. Then, when you take the ovaries out of a group of mice, you find that their activity level falls off to about 50 per cent of base line. Then, we were curious to know if these menopausal girls would run when they were hungry, and they apparently do run when they are hungry.

I throw this on just to say, *mea culpa.* I have always said that

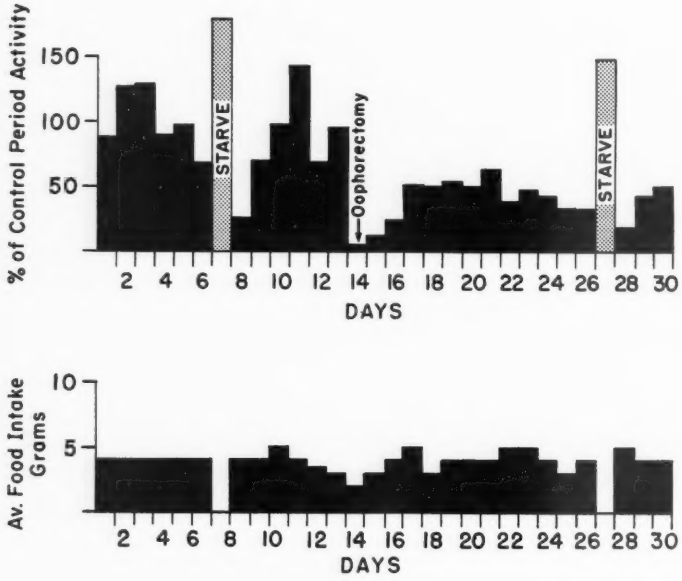


Fig. 10

women, after the menopause, become sloppy because they were no longer interested, but I am now converted to the idea that there may very well be endocrine factors that alter metabolic behavior in many mysterious ways, and this is one mysterious way in terms of the behavior of the mouse.

This (figure 11) is a sort of sticky one. This is from the work of John Brobeck, and I might have stolen it from anybody, but what it shows you is a cross section of the hypothalamus of a rat. What I hope to do with this and the next few illustrations is make some sense for you out of what we now know about control of eating behavior, lodged in the hypothalamus, not only of the mouse and rat but also of the dog, cat, monkey, ferret, sheep, goat and so forth. It seems to be the hypothalamic area which is the center that brings together and synchronizes the functioning of eating behavior.

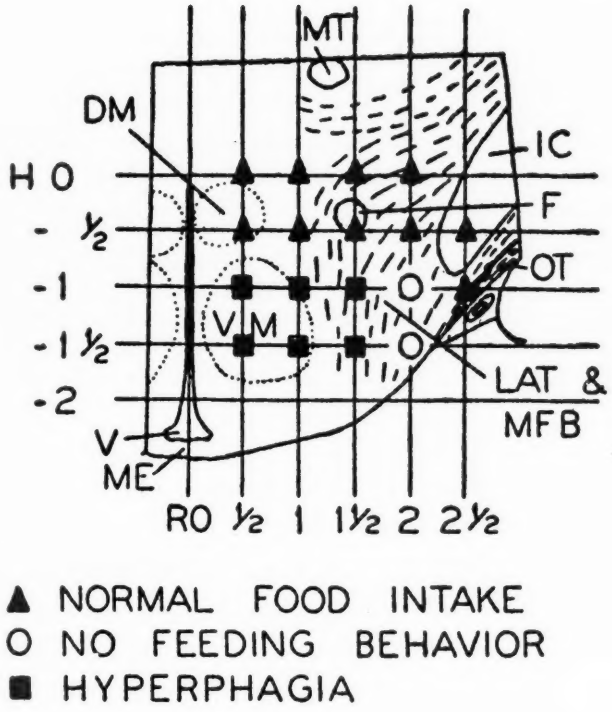


Fig. 11

As you look at this, you will see it has some filled-in squares, in the ventromedial nucleus of the rat, and it turns out that when these square areas are destroyed bilaterally, the animal gets fat. This has been shown for many years. There is no question about this. Bilateral destruction, and minute destruction it is, in the ventromedial nucleus of the hypothalamus of the animal results in obesity due to eating too much.

In more recent years, it was discovered that if lesions are made lateralward, and this scale is only in half-millimeters, so you can see how precisely localized these centers are in the hypothalamus — if you move half a millimeter lateralward and destroy those

areas bilaterally, the animal will literally starve to death. In the rat or cat, when lesions are made in this area, the animal will not eat food that is put in his mouth. The monkey will eat food that is put in his mouth, but will not take food and put it in his mouth. There is a most extraordinary localized control of eating behavior.

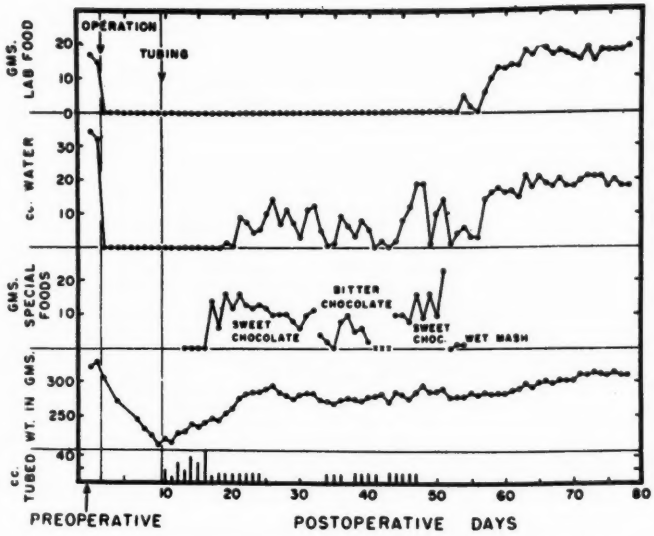
If you go a little north or south of these areas, you cannot affect feeding behavior.

Now, this very precise localization of one area which, when destroyed, results in obesity, and the other area which, when destroyed, results in aphagia and death, is not too dissimilar from others where we have controlling mechanisms that have to do with the heart rate, with control of vascular tension, with control of breathing, and so forth. There are stopping-and-starting centers, off-and-on centers in the brain that have to do with other types of behavior.

If these studies are put together to make sense, we find it makes the best sense to say that the lateral centers are food-drive centers and the medial centers are satiety centers. If the medial centers are destroyed, there is no satiety message to the hypothalamus and the food-drive centers are unopposed. If, on the other hand, the food-drive centers are destroyed, no matter what happens in terms of satiety, there is no food drive and the animal will not eat.

This graph (figure 12) shows you a few illustrative studies. This is work done by Teitelbaum and Stellar. It shows that, if you destroy the lateral hypothalamic centers that have to do with food drive and tube-feed the animal, you may be able to keep him alive for weeks by tube-feeding and, subsequently, you may get a recovery, so that these animals will once again begin to eat. It is interesting that, if these animals were studied months later, they appeared to be normal, but they had one residual defect that could be detected; that is, when they were given a diluted diet, they were unable to make a quick and proper adjustment.

One reason for presenting this graph is to remind you that, whereas it is fun to simplify things and see general patterns, there are extraordinary mysteries involved in this area which may be the clue to our understanding and, yet, at the moment, are great mysteries. The mystery in this graph is not that the animal relearned his eating behavior, or that there are men

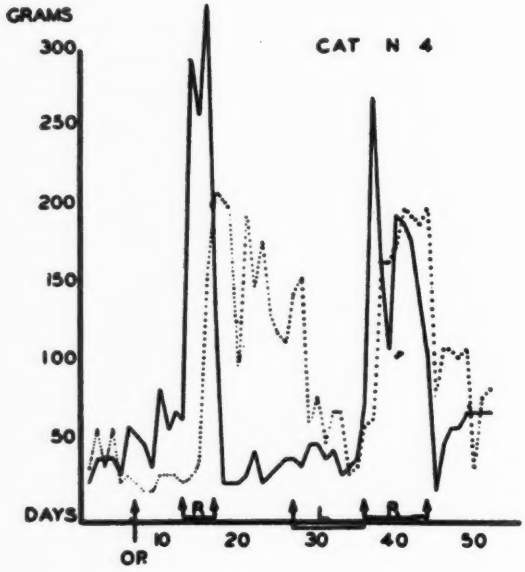


Course of recovery of eating behavior in one rat, following complete refusal to eat produced by hypothalamic lesions. The *x*'s show when 25 g of evaporated milk was offered and eaten.

from P. Teitelbaum and E. Stellar
Science 120: Nov., 1954

Fig. 12

who are wild enough to spend their time feeding rats who won't eat but, rather, that these animals voluntarily would eat sweet chocolate. These rats, I was assured, had never seen sweet chocolate before, never in their life experience, nor, going back in generations of rats, had they been exposed to sweet chocolate; yet, if they had had an opportunity to have sweet chocolate, they would have survived, whereas they would not survive with the ordinary chow available to them — which shows that things aren't as easy as I am presenting them to you.



from: J. M. R. Delgado and B. K. Anand
Am. J. Physiol. 172: 1: 1953

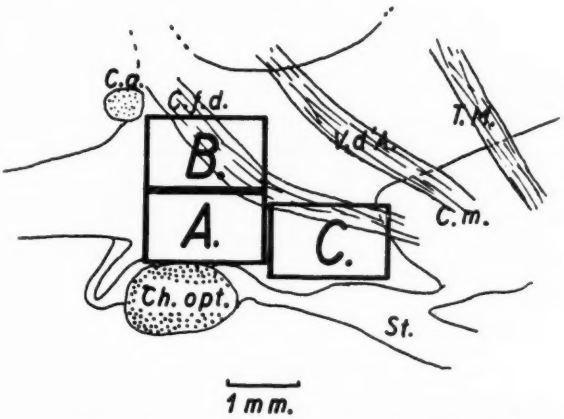
Fig. 13

In any event, it is possible to do studies in these areas. This (figure 13) shows you some studies done by neurologists at Yale, who implanted electrodes in these hypothalamic areas, the ones which, when destroyed, will result in failure to eat. It turns out, as one might hope, if God's in His heaven and things fall into place, that if you stimulate this area, the animals will eat more. This, in fact, is true. If electrodes are implanted in these lateral hypothalamic areas and they are stimulated periodically, the animal will actually eat 10 times the volume of food and milk in a 24 hour period that he did under control conditions.

More recently, some studies were done in India by Dr. Anand, which indicated that if you stimulated the medial centers, the

animal, even though hungry, would stop eating. The pattern falls into place, therefore, that the medial centers seem to control the food drive and, may be, what we might call the satiety centers, the lateral centers, we may think of as centers that represent the stimulation of eating activity.

This is an exceedingly complex business, but I present this (figure 14) to illustrate a single point; namely, that this area of



Paramedian sagittal section through the hypothalamus of rat.
A. *B* and *C* = The three samples from the hypothalamus, used for analyses.
C. a. = Anterior commissure; *C. f. d.* = Columna fornix descendens; *Ch. opt.* = Optic chiasma; *C. M.* = Mamillary body, *St.* = Infundibular stalk; *T. M.* = Tractus Meynert; *V. d' A.* = Mamillo-thalamic tract (Tract of Vicq d'Azyr).

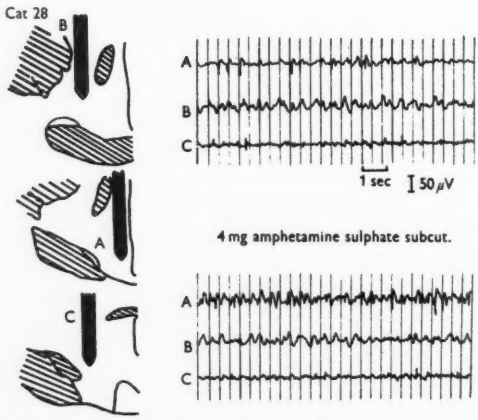
from: A. Forssberg and S. Larsson
Acta Physiologica Scandinavica
Vol. 32 Supple. 115, 1954

Fig. 14

the hypothalamus is a very specialized area. I won't go into any details of the experiment except to say that some Scandinavian workers were able to get out this feeding area and compare the uptake of radioactive materials of this feeding area with the area contiguous with it. They were able to show that there was entirely different behavior in this area. This area took up radioactivity at a higher rate when the animal was starved than when the animal

was fed in contradistinction to the area right next to it, which took up radioactivity when the animal was fed higher than when the animal was starved.

This (figure 15), again, illustrates the specificity of this area. Without going into details, I would call your attention only to the fact that line A changes (these are electroencephalographic recordings of Brobeck on a cat) where the electrode was placed into this feeding area and into areas nearby. Then the cat was



Change in electrical activity recorded from medial hypothalamus (A) of cat 28 after subcutaneous injection of 4 mg of amphetamine sulphate. Position B is in rostro-lateral hypothalamus; C is in caudo-lateral hypothalamus. Upper record before, lower record after injection.

from: J. R. Brobeck, S. Larsson and E. Reyes
Am. J. Physiol. 132: 359, 1956

Fig. 15

given amphetamine and the brain waves coming from this area of the hypothalamus were altered by this drug, which is known to decrease feeding behavior. The specificity of this area, then, is most remarkable in response to drugs, in localization of toxins, in uptake of radioactive materials. We have studies done recently on some animo acids in this particular area.

Well, what I have said to you is that from the work of the neurophysiologists in many, many animal species, it seems very clear

that there are regulatory mechanisms in the central nervous system that control feeding behavior; that there are precisely localized areas which, when stimulated, will increase feeding, and others, when stimulated, will decrease feeding and which, when destroyed, will in one case cause failure of eating and in the other case will cause eating without any evidence of satiety.

We know from animal work that it is possible to produce precise lesions in this area and we wonder whether this has any relevance to behavior in man. I will come back to the question

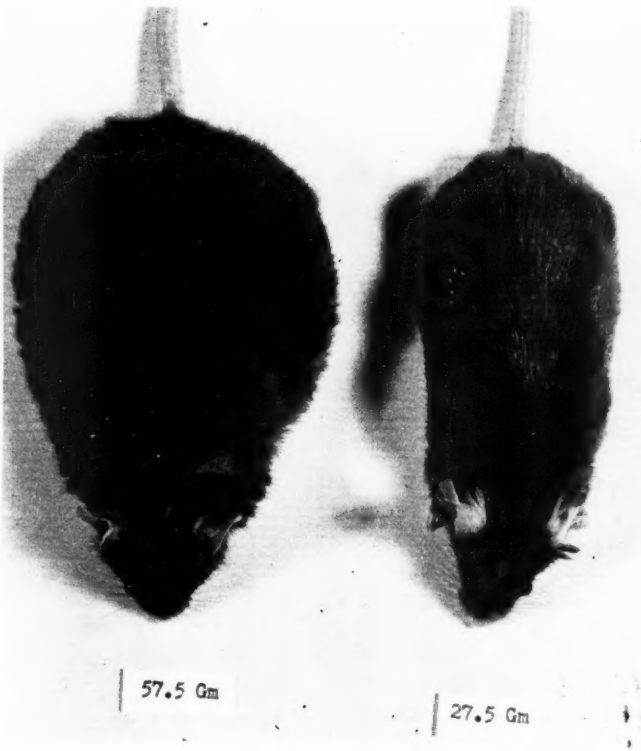


Fig. 16

of man after I have reviewed another aspect of experimental obesity.

If we look at the problem of experimental obesity, we will all agree that there is this regulatory area which may be distorted. These animals (figure 16) are from a genetic strain that you can buy. In case any of you want to take some home to the children, you can order them from the Jackson Laboratories in Maine. Ask for the OB-OB strain of congenitally obese mice. These girls are cousins. One is 57 Gm. and the other is one half of that. If you treat these girls nicely, they will get up to 100 Gm. They will get so fat that you can't tell which is fore and which is aft. The fat sort of overflows all areas and they look like tanks. It's hard to say which way they're going. They don't move very much, either.

These congenitally obese mice have nothing wrong with their regulatory mechanism in the brain. We can demonstrate this by all sorts of techniques that we have worked out with regard to eating diluted food, with regard to running when they are hungry, and also with regard to cytological studies of the hypothalamus. There is nothing wrong with the regulatory mechanism. Their problem is a metabolic one.

To review some of the evidence very quickly, this (figure 17)

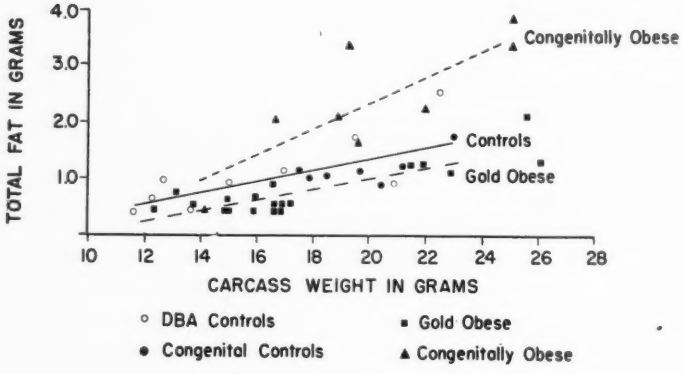


Fig. 17

shows you what happens when you starve these animals. It represents a whole group of mice who were starved from obesity weights down to rather undernormal weights for mice. This is a graph showing the total fat in the carcass, when these animals were sacrificed, as against the carcass weight. The point of the graph is that, if these congenitally obese animals are starved and then sacrificed, they end up showing that they have more fat in the carcass than their cousins who do not have this metabolic disorder. They have more fat in the carcass than animals that have been fat, because they had something wrong with their regulatory mechanism in the hypothalamus and they have more fat than ordinary control mice who are starved to this weight. It looks as though these mice have what some patients claim, namely, a tendency to hold onto fat, even when they are starving.

This (figure 18) shows a more complicated study of the same problem. What this represents is the change in the appearance of the nonesterified fatty acids after periods of starvation, when one takes a piece of fat from some mice and studies it. The black bars represent the amount of nonesterified fatty acid, which is the fashion in which the fat is mobilized from the fat depots. We find that this goes up very strictly as the animal is fasted 8, 16, 24 and 48 hours. Yet, the little hatched bars show

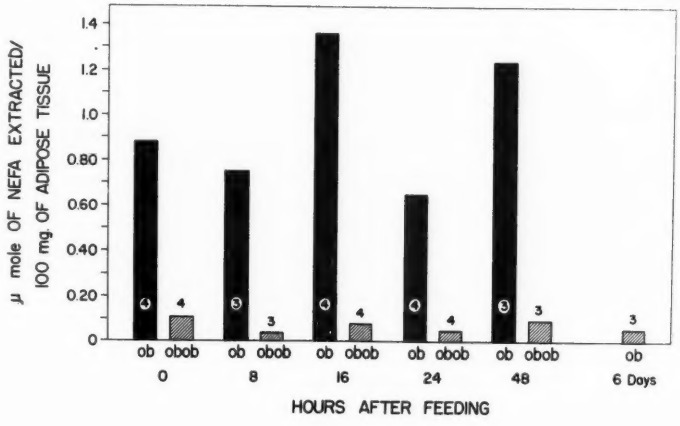


Fig. 18

you that fat from these congenitally obese animals does not break down, as evidenced by a failure to show the nonesterified fatty acids in the same fashion as their controls.

More recently, Frank Engel at Duke has done some studies in in which he showed that these congenitally obese animals did not mobilize their fat when they were given adrenaline, the way normal animals will, so they have some difficulties in mobilizing fat.

This (figure 19) shows another type of rather sophisticated study, in which we studied the ability of the fat tissue of various animals to make fat. This is done by taking a slice of fat, putting it in a beaker, shaking it up with tagged acetate, a 2-carbon fragment, and then, after a given period of time, stopping the process and extracting the radioactivity that now appears in the fat. By this device, one can measure, in a sense, the rate of fat synthesis.

If one looks at this, it is a complicated graph, but the point

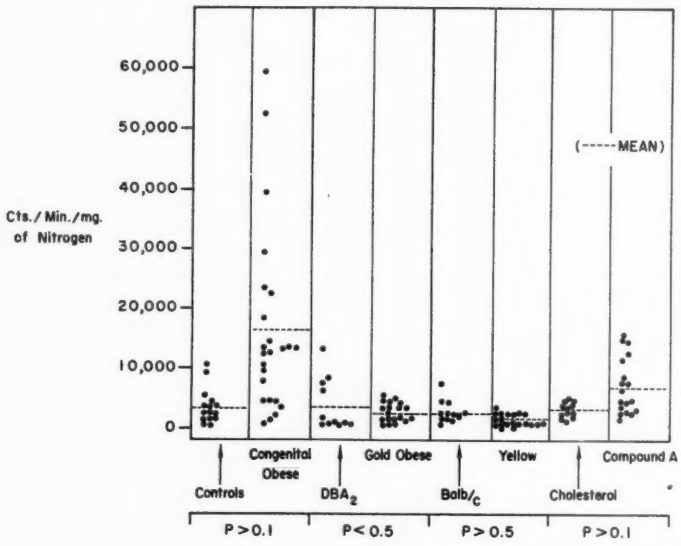


Fig. 19

of it is that these congenitally obese mice tend to make fat faster than their controls. The animals that have so-called gold obesity, that is, mice who are fat because there is something wrong with regulation, do not make the fat abnormally fast. Animals with another kind of congenital obesity, the yellow ones, do not make it abnormally fast. The only group that shows some abnormality in this regard is the animals who are called Compound A. This represents a group of animals who were given an adrenal steroid in the form of pellets. We find, in these animals given adrenal steroids, behavior very similar to our congenitally obese animals.

It does not appear on the graph, but they, too, are very niggardly about burning their fat. They do not give it up, the way the controls do, with starvation. Here, as we see, they have an increased capacity for fat synthesis.

This (figure 20) is somewhat of a digression but along the same line of thinking. I would like to reemphasize this point about the ability to make fat. These graphs represent measurements, once again, of the ability of fat synthesis. But this experiment is an entirely different one. This is one in which we

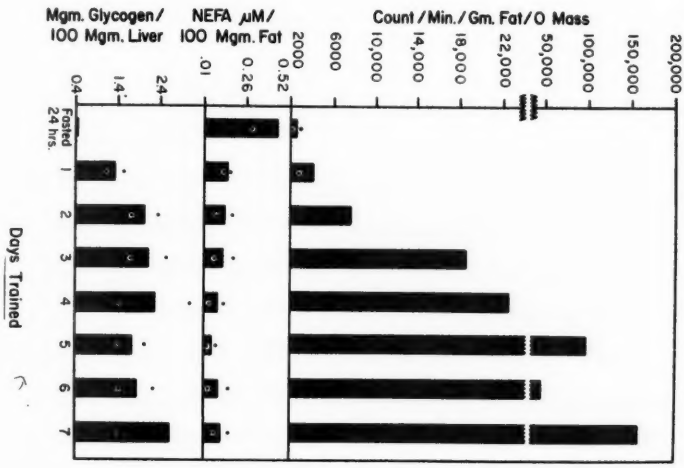


Fig. 20

have taken a series of rats and trained them to eat their entire food allotment. They have a free allotment of food and can eat as much as they wish. But they have to learn to eat it in two hours. The animal, in two hours, then, eats his full daily requirement.

What we see here is that the ability of their fat tissue to synthesize fat increases in a stepwise fashion until five days have gone by. Then, the ability to synthesize fat is at least 10 times what it was before the animal was trained. Now, this is an extremely important concept; namely, that there are adaptive enzymes, or that the enzymes of the body will adjust to metabolic challenges and requirements in such a way that, simply by training the animal for five days, the animal's behavior changes in a very striking fashion.

In a few moments, I shall bring out the implications of this type of thing for man, but I would like to say now, that some recent unpublished studies of Dr. Hollifield, in our laboratory, indicate that once these animals have been trained in this fashion, it takes several weeks, after they are once again put back on an ordinary diet, for their fat synthesis rate to fall back to normal; so we have evidence, then, of a congenital defect in animals which is manifested by an increased tendency of the fat tissue to make fat and by a decreasing tendency of the fat tissue to break down.

And now, I will tell you, in addition to this congenital strain of animals who have this defect, we can produce this distortion or disturbance in fat metabolism by the administration of adrenocortical pellets to our mice, and that we can produce a similar distortion by changing the eating pattern in our rats.

This is a silly cartoon (figure 21) that illustrates an extraordinary thing. If you were rat doctors instead of people doctors, and four fat girls came to your office and sat around commiserating with each other the way these four are, these girls would be right. The question is whether the fat ladies who tell us some of these things are right.

The concept of obesity that we have developed in the animals, then, has given us many new insights and made us much more humble than in the old days. I used to have an arrogant way of saying to the patient, "The only way you can get fat is by eating

Well, it runs in my family to be fat.
Why, I've hardly had a nibble all day!
I'm sure it's my glands!
Everything I eat simply turns to fat.

Fig. 21

too much." Then I would show her the terrible little thing from one of your insurance companies that shows the increased expected death rate that goes with being overweight, in proportion to the degree that you are overweight. My friend, Rynearson, at the Mayo Clinic, used to shove this in front of his patients and say, "You're digging your grave with your teeth, Ma'am."

I've sort of fallen back from this general approach to the fat patient and I'm not at all sure that it is one disease or that the psychological factors may not, in fact, be secondary to something metabolically or regulatorily disturbed. Recently, there was an article in the *Scientific American* which showed a Hottentot woman with an extraordinary steatopygia — you know what I'm referring to here — and, as I looked at that picture, my feeling was, this lady eats because she has to fill this area. Now, that is a silly way to put it to you, but what I would say is that, as we try to translate from our animal studies, we begin to ask our-

selves some of these questions. Is it not possible that there are individuals who have fat depots that are calling for food, and is it not possible that these individuals have to fill these depots and remain hungry until they do? Those of you who have growing children around are familiar with the problem. After they have eaten and have helped to clear away the dishes, you say, "What are you doing out there?"

"I'm getting a piece of cake."

"You're not eating again!"

"Yes, I'm hungry."

"Why didn't you eat more at the table?"

"Well, I did."

You realize that this is a combination of a good metabolic pattern. They are growing, one hopes, and putting on muscle and the regulatory mechanism in the hypothalamus gets the message that they need more food because they're using it for growth and, hence, they are hungry.

One of the questions one might ask is, "Are there genetic strains of obesity?" Just as we know very little about the genetics of other common diseases, we know, really, nothing reliable about the genetics of obesity. Studies that have been done are not reliable because the effect of the sociological and the intrafamily relationships and so many other factors that you are aware of will influence eating behavior.

Arthur Steinberg at Western Reserve, a very gifted geneticist, is working with the Hutterites in the Northwest. This is a religious group of Anabaptists who live together. The reason he is studying them, with respect to obesity, is because all the children eat together at one big table. The bowl is passed around and Daddy isn't there to say, "Good fellow, ate all your Pablum," or something repulsive like that. Mother isn't there to say, "You had better finish your plate, dear, or else," or somebody else isn't there to say, "Don't take another slice." These children are not threatened, or conditioned, or altered by the family uncertainties and the family patterns.

One interesting thing about this Hutterite group that, to me, is rather attractive is that the parents eat first and the children

stand in line. There's something to be said for this freedom that they have. At any rate, perhaps, from the Hutterites, whose family stories are available, the genetic pattern, the family lines going back for some five or six generations — something will come that will be helpful in the genetic area.

What is being done at the present time to bring the story back from mouse to man? I carried you from man to mouse in despair. I have told you the story in the mouse, which is a very exciting one. How fast are we moving back from mouse to man? I must say not too fast but, at present, in at least three laboratories that I know of, there is the conviction that we are going to find something remarkable about fat people, other than that they eat too much.

Studies are being done to see whether the response to adrenaline, the response to starvation, is significantly different in fat people from thin people in terms of mobilization of their free fatty acids. There are studies that we have started and which have been going on in at least two other places that I know of, taking biopsies of fat tissue to see whether there is something remarkable in fat people and thin people in one area of the body compared to another area of the body.

Time does not permit me to go into the types of experiment that are being done, but I think it is fair to say to you that we are looking now at obesity in a somewhat emancipated fashion. We have sort of come round the circle again, and we say that these fat girls may be right.

PRESIDENT WILLIAMS — Thank you very much, Dr. Parson. If any of you have any questions you would like to ask Dr. Parson, we will give you an opportunity.

DR. JOSEPH W. JOHNSON, JR. [Interstate Life and Accident, Chattanooga] — I might say, first, that this sort of *geheimrat* professor delights my aging soul. But I wonder if, with all your interest in what you call paleontological obesity and our concern for neo-obesity, you have done or have any studies been done, say, on decorticated animals? This is, of course, a common pathway, and Eastman at Tulane has been working on the paleocortex area. Have there been any decorticated cats, for example, explored in this area? I think your own convictions, your own wit

and warmth and amusement show your psychological bent in this particular area. Certainly, your Venus of Willendorf meant more to you than just a sudden flash on the screen. Has there been any possibility of exploring this area from the cortex down, and are you intrigued with any possibilities in that area?

DR. PARSON — Joe has been needling me for many, many years, and when he said "a sort of professor" made me feel very insecure. Any time I get fresh on the platform, I wonder if there is an officer from the group who thinks this is not proper for a professor. In any event, there has been work done in this area, and Joe Johnson is right. When I talked about the hypothalamus, I was only talking about the way station. There is evidence that the old brain, the limbic system, does, in fact, influence eating behavior rather strikingly.

There are people working in this area who can produce abnormalities in the eating pattern of animals by lesions all along the system of the old brain. Stuart Wolf has a patient, or did have, I guess, who was decorticate, who had an extraordinary pattern of eating, when food was offered, in terms of obvious lack of homeostatic control.

I should, perhaps, pull back just a little and say, in emphasizing the hypothalamus, I have simply taken an area that is so conveniently organized for manipulation. I should have said that my love for psychiatric things does run fairly deep and it is not inconceivable that the complexity of the problem in man is tied in with this extraordinary superstructure of synapses and relationships and memories and fantasies and so forth, that distort what would be a nice homeostatic mechanism in an animal that did not have all this advance that goes with being a man.

The answer, surely, if there is an answer, and if it comes, will be one that will show that there are many facets to this problem. I think, as we dissect it out, all we are doing, or all I was doing today, was, perhaps, in a sense, bringing you up to date (I hope that doesn't sound too arrogant) about the directions in which the physiological thinking has advanced in our attack on the problem. It may turn out that, in man, the psychological factor is still the most important one but, certainly, in terms of management, I am as frustrated about handling fat people as I can be about any

disease with which I have to deal. I have more unsuccessful patients and, when they come back, it always troubles me because I know they are searching for something and I know I don't have the answer.

In case anybody wants to ask questions for your wives or children, we don't have any secrets, as yet, about how to treat them. The gimmick of using something that comes in a bottle that you can take for a day is not any fancier than any of the other gimmicks that have come and gone in the management of obesity. Today, it will pay its dividends to the lucky people who invented it and then it will go its way, because it it not the answer to this complicated problem.

PRESIDENT WILLIAMS — Are there any other questions?

DR. PEPPER — Did you find any difference in life expectancy in the different classes of rotund roaches?

DR. PARSON — You become very fond of these rotund roaches, I might say. We have not been studying the problem. There is a group at Bethesda, in the NIH, who have been interested in degenerative diseases in this group. I think they find that they are not as healthy as their thinner cousins. But I can't give you precise data as to what they found. I have not seen the published results as yet.

DR. IRVING — May I ask Dr. Parson how he answers his patients' questions on this Mead Johnson substitute known as Metrecal?

DR. PARSON — Pretty much the same as you or anyone else would. I tell them, yes, I think it's a satisfactory way to handle it, if that is what they want to do and, maybe, after they have done it for a while, they can come back to eating a diet which is somewhat deficient in calories. I don't really have a good answer for them. I sort of give them sympathy.

What we used to say was, "Yes, this is a fine thing because now you can recondition yourself or reeducate yourself in terms of eating. Perhaps, you no longer will turn to food for this enormous gratification, once you have found that you can lose weight, once your weight gets down," and so forth. But the tragedy of the story is that, if you take long-term followups on patients who fall into this category, you have to realize that the

fellow who can control his weight never gets into the hands of people who uprate his insurance and never goes to his doctor about it. It's the fellow who keeps having trouble, the recidivist, who keeps coming back. Hilda Brück, who is a child psychiatrist in New York, has studied these fat children and, perhaps, you know the tragic story she tells of the increasing level of weight. You put them on a diet and they drop down; then, they get off the diet and go back and drop down and go back. You get a pattern that is interrupted by a series of valleys and here you have the terrible feeling that, perhaps, it would have gotten there if you hadn't gone through all this repeated torture.

I am sure that, in this group, there is a great deal of sophistication about the work that was done with starvation and refeeding of populations, the work of Ancel Keyes and others, which indicated that it may be more dangerous for an individual to lose weight and regain it than it is to stay constant.

In answer, then, to the question about Metrecal, I tell them that I know three doctors on our faculty who are taking it, and I have no objection if they want to do it but I hope that, some place along the line, they will be able to be satisfied with less food and hold their weight at a more satisfactory level.

I might say, though, in terms of treatment, that I have taken the position — and I know this is shocking to insurance people — that there are things worse than being fat. If you can name two, I'll match them.

PRESIDENT WILLIAMS — Are there any other questions?

DR. HOWARD M. MCCUE, JR. [Life Insurance Company of Virginia, Richmond] — How about the anorectics?

DR. PARSON — Well, I have become much more humble about those, too. I can remember the first time I used an anorectic agent and the patient said it was wonderful. She was losing weight and she felt better than she had in years. I followed her along and she came back to refill her prescription. She needed more. This, as you know, is inherent in this problem. Then, she stopped losing weight. I said, "Well, what is happening?" She said, "Oh, that really isn't so important, but I sure like the drug." What happened was, and the reason I went into a decline on the use of

anorectic agents, that my patient had become dependent on the drug for the "lift." She had lost the anorectic effect and now I had made this poor woman, who, in a sense, I thought of as neurotic to begin with, dependent upon a drug for her mood control. So, I have been soured on it.

On the other hand, from animal studies, it is very clear that these drugs do have some sort of effect on feeding behavior. Personally, I do not use them. We did a doubleblind control study at our hospital, using several doses of one of the new ones. Well, the new one always turns out to be just a little more dexedrine and a different sedative. That is the way most of these combinations are being marketed now. The word got out that after 10 years of virginity and purity, I was ready to offer a drug. It was amazing but from under the beds, from behind the cupboards, from hidden areas of the university hospital, fat people kept pouring in from all over, people who had avoided me through the years now came in and said, "I hear you have a drug." So we started the study and we had magnificent results for the first month. We had magnificent results, really, on our placeboes as well as on our drug. Then, you know what happened. By the third month, I was talking with my secretary and playing tic-tac-toe. They didn't come back.

And so, when you say, what about these drugs? I say, yes, you have the same experience I do. They're great, and you can rationalize their use by saying, if you can simply get the patient started, give them a little help and get them over that first hump. My answer to that is that this temporary help is not terribly difficult, really, if you put enough enthusiasm and interest into getting the patient started and giving him enough optimism that something is going to be done. Anything will get him started, but it's the long-term pull. It's the time when they stop losing weight at the rate at which they are accustomed that is critical.

This happens, I am sure, not only because of water shifts, but also because of metabolic alterations. I meant to emphasize in the clinical side of the problem that many fat people will eat the way our 24 hour rats do; namely, they don't eat breakfast, they have practically nothing for lunch and eat one meal. Well, their fat is geared to take care of that meal and they make fat,

undoubtedly, at an accelerated rate. Whether or not they have altered their handling of fat, in some fashion, so that it makes it more difficult for them to lose weight afterwards is one of the problems that we need to solve.

In terms of anorectic agents, I think, perhaps, they are a useful adjuvant but exceedingly limited in terms of the long-term problem.

PRESIDENT WILLIAMS — Any other questions? Well, I know you will join me in thanking Dr. Parson. It has been a real privilege to have him here.

Our next subject is one that has given us much concern for many years. It involves the economics of writing the attending physician of an applicant, in order that underwriting action can be accurate, and the public relations of giving the attending physician the findings of insurance examinations. The subject has been considered thoroughly by the professional relations committees of this Association and the Medical Section of the American Life Convention, as well as by the Health Insurance Council.

We are indeed fortunate in having a member who has been willing to give it a real review, to moderate a Panel Discussion — Dr. Francis P. Bicknell, Medical Director of the State Mutual Assurance Company of America. Bick, will you introduce the other members of your panel?

PANEL DISCUSSION

CORRESPONDENCE WITH THE APPLICANT'S PHYSICIAN

FRANCIS P. BICKNELL, M. D.
Moderator
Medical Director
State Mutual Life Assurance Company of America

KENDALL B. VAUGHAN, M. D.
Associate Medical Director
Occidental Life Insurance Company of California

RAYMOND K. FARNHAM, M. D.
Medical Director — Underwriting
Metropolitan Life Insurance Company, New York

MODERATOR BICKNELL — Thank you very much, Ennion. I appreciate those kind words. Had I known that I was going to follow Dr. Parson, I am sure I would not have accepted your invitation to participate in this meeting. That is quite a challenge.

Review of the records of this Association indicates that the majority of panels have been composed of a moderator and four panelists. This morning, there are only three of us here on the platform. Let me introduce them to you. First is Dr. Raymond K. Farnham, Medical Director-Underwriting, Metropolitan Life Insurance Company, New York. Second is Dr. Kendall B. Vaughan, Associate Medical Director, Occidental Life Insurance Company of California, Los Angeles. What we lack in numbers, we hope to make up in quality, and to give you food for thought in your correspondence with applicants' physicians.

In the early days of life insurance, it was common practice to require applicants to appear before the Board of Directors. There was, usually, at least one physician on the Board.

Growth of the insurance industry tended to make this custom

impractical. Shepherd and Webster, in their book entitled "Selection of Risks," say:

> *"In time, the growth of companies made it physically impossible for the directors to interview every applicant and the practice of securing a statement from his family physician was established. Later still, a doctor was asked to examine the applicant and report his findings."*

Until World War I, the majority of applicants for individual coverage were examined. About 1916, non-medical was introduced in Canada as a result of a shortage of physicians and higher fees charged for insurance examinations. At this point, the insurance industry again turned to the attending physician for confirmation or clarification of the applicant's medical history and general condition. The forms used for this purpose have varied widely both in format and in name, being called AP, PS, RAP and so forth, but they all serve the same purpose.

With the continued growth of our industry, there has been a similar growth in the amount of correspondence with the applicants' physicians. Most of this correspondence deals with a request for information designed to assist us and our underwriting associates in properly evaluating the risk involved in insuring a given individual.

Mr. William Allen Richardson, Editorial Director of Medical Economics, a widely read publication for the medical profession, spoke at the annual meeting of the Medical Society in Worcester. He suggested that, because of the increase in Health Insurance plans, physicians will have considerably more paper work and require more aids to complete the paper work. I mention Mr. Richardson's talk, not because we are dealing with health insurance plans and claim forms, but because I believe there has been a substantial increase in the amount of correspondence with physicians whose patients are applying for life insurance. In 1939, Dr. Walter A. Reiter, of the Mutual Benefit, speaking at the American Life Convention Medical Section, said:

> *"This investigation covers a review of 5,136 consecutive policies. We had 167 statements from attending physicians or hospitals. This represents statements in about 3 per cent of the cases studied."*

In 1950, speaking at a meeting of the Home Office Life Underwriters Association, Mr. Andrew Webster of the Mutual Life said:

> *"Attending physicians' statements are one of the items of additional information which most underwriters would consider valuable. Most companies have rules as to when statements are requested, depending upon age, amount of insurance, nature of impairment, and time elapsed since the episode. That there is a wide variety in these rules is evident from the figures given in Mr. Paul Frazer's discussion of Attending Physicians' Statements at the last meeting of the Association. The percentages of statements compared with examinations were given for several companies and these percentages ranged from 7.5 per cent to 28.9 per cent. The number of statements is bound to vary with the average amount applied for, with the age distribution of the business and, I would imagine, with the percentage of non-medical business written. Even allowing for these, the range was wide."*

My own Company has completed studies of Physicians' Statements in 1952 and 1960. The results are shown in Table I.

TABLE I
STATE MUTUAL

Basic Statistics	1952	1960
No. of Cases	4080	5160
No. with Statements	837	1563
% with Statements	20.5%	30.3%

With an increase of 10 per cent in an eight year period, the question may well be raised: "Are we asking for too many statements, and having too much correspondence with applicants' physicians?"

Dr. Farnham, of the Metropolitan, will report on his study of this subject.

DR. FARNHAM — We studied 346 cases on which an R.A.P. had been requested and I think I can best present the results of our study with a few illustrations.

In evaluating risks for insurance, one of the problems is to determine whether obtaining an R.A.P. permits more favorable action, and I believe this is one of the primary criteria for setting up standards for classification of risks and for instructions when to request an R.A.P. On the other hand, one must consider the R.A.P. which makes the underwriting worse than the applicant's admissions would indicate. The art of underwriting calls for a sensitive balance between these two factors; that is, will the R.A.P. improve the underwriting picture, or make it worse?

A great deal of underwriting experience and judgment are required to determine when you should request a statement and, as we all know, this is something that cannot be spelled out in the form of a rule. However, I believe the facts which I am about to present may add a little to the general knowledge concerning the final action taken when a statement is requested.

This (figure 1) shows roughly the percentage of statements

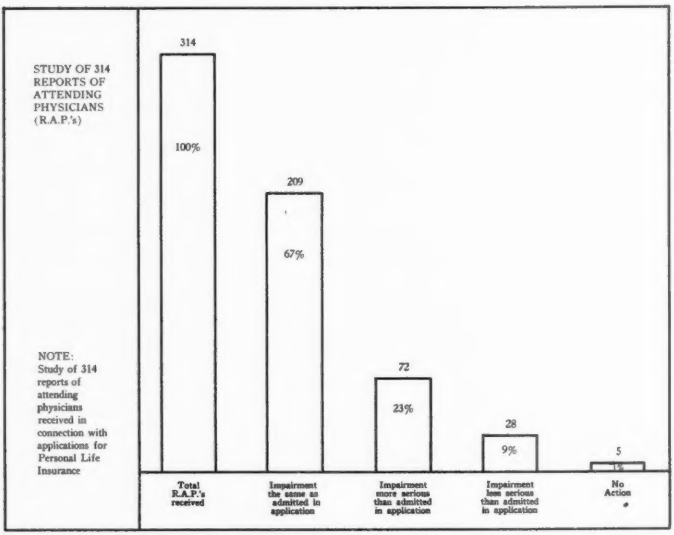


Fig. 1

which confirm the information given on the application, the percentage of R.A.P.'s which yielded information of a nature more serious than admitted by the applicant, the percentage of R.A.P.'s which yielded information less serious than admitted by the applicant, and the percentage of applications filed "No Action" for various reasons. In spite of our reluctance to obtain R.A.P.'s unless absolutely necessary, the fact that 23 per cent make the picture more serious than the first impression would indicate, makes me believe that "When in doubt, get a statement" is a good rule of thumb.

Column 4 shows the fact that 9 per cent of the cases were improved by information contained in the R.A.P. In other words, the information submitted by the attending physician was such that we were able to offer a policy at a better rating than we would have on the facts admitted by the applicant in the history.

If this 9 per cent is added to the 23 per cent shown in Column 3, where the R.A.P. make the underwriting picture worse, this gives a figure of 32 per cent of the total cases on which an R.A.P. was ordered, and in which the report was vitally important to the underwriter. This would seem to be a general argument in favor of ordering R.A.P.'s regardless of cost and inconvenience.

In this table (figure 2), I have listed the major impairments reported and the corresponding action taken. Here again, the figures in Column 3 are not very reassuring with respect to the face value of the applicant's admissions. Also, the small number shown in Column 4 would seem to indicate that rather few cases are made more favorable by an attending physician's report.

If this graph (figure 3) reflects what is going on in the industry at large, it is cause for concern to know that 10 per cent of the cases were "lost" where an R.A.P. was requested but not received.

I think we should all be concerned about the "professional relations" aspect of our requests to doctors for information about their patients, since many doctors refuse to cooperate with us because of previous bad experience, or because of low fees.

We do not like to rate on an attending physician's statement alone (for reasons known to all of you), but when admission of an impairment is given on a non-medical form and sufficient

MAJOR IMPAIRMENTS AND ACTION TAKEN

Impairment	All R.A.P.'s Received	Resulting in Same Classification	Resulting in a More Adverse Classification	Resulting in a More Favorable Classification	No Action
Heart	40	21	12	5	2
Psychoneurosis	37	23	8	5	1
Tumor	36	30	4	2	–
Checkup	27	26	1	–	–
Ulcer	25	22	3	–	–
Diabetes	17	11	2	4	–
Blood Pressure	16	10	4	2	–
Tuberculosis	14	5	6	2	1
Colitis	10	8	2	–	–
Gall Bladder	8	5	3	–	–
Miscellaneous	84	48	27	8	1
Total	314	209	72	28	5

Fig. 2

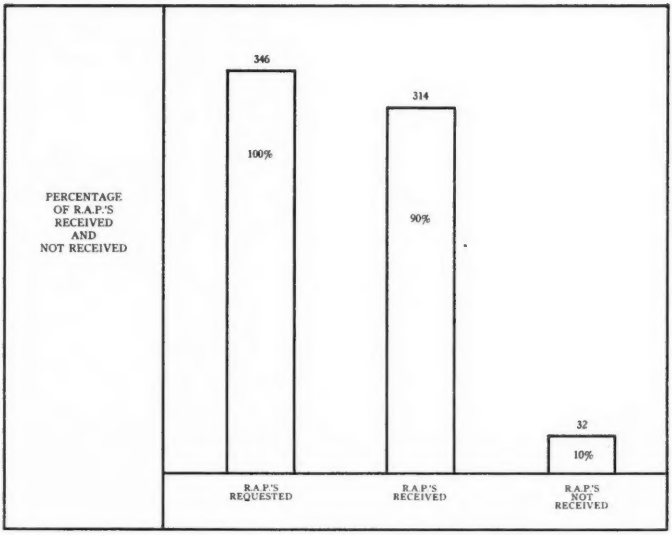


Fig. 3

confirmatory information is given by the attending physician, we can usually rate on smaller-amount cases without an examination.

Figure 4 shows what happens when a statement is ordered in lieu of examination. Occasionally, a physician writes to complain about having been embarrassed by our action in such cases, but this is the exception rather than the rule.

The problem of multiple R.A.P.'s is always distressing, and it seems to me that this problem is more frequent now than it was several years ago, because people nowadays think nothing of going to two or more physicians in the space of even one year. I don't know any solution to this problem except the development of judgment in the underwriters. I believe the statement form should request information as to whether the applicant had been referred to the doctor and whether he, in turn, had referred his patient to any other doctor or hospital. Also, the names of all doctors and hospitals should be given.

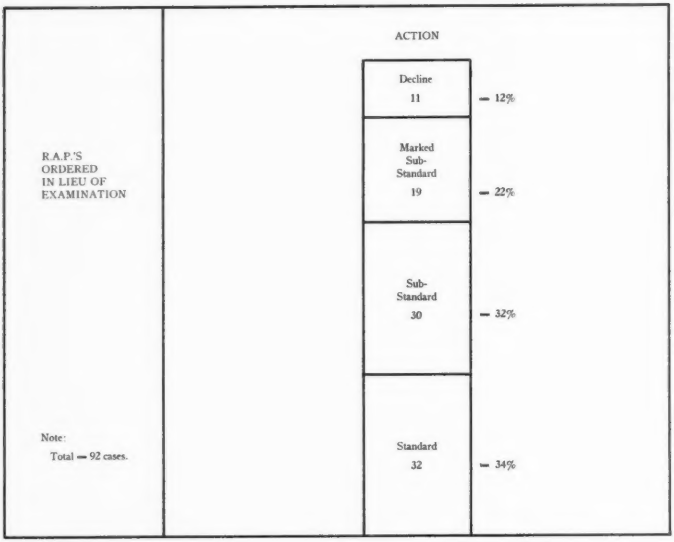


Fig. 4

Another point is the fact that when a person applies for a large amount of insurance, he is apt to apply to more than one company, and I suppose that attending physicians are rather annoyed when they receive requests for statements from say three or four insurance companies simultaneously. We have tried to alleviate this situation, somewhat, by providing a carbon sheet with our R.A.P. form so that the physician will have a copy of his report to use for his own file.

Another problem is where large amounts are applied for and, especially on applicants over 50 or 60 years of age, where no admission or history of any illness is given on the application, and where on previous applications in our Company, and/or on investigation, a definite history of a ratable impairment or prolonged illness and treatment is revealed. In some cases, the applicant denies he has ever been sick or ever been to a physician or hospital and all records are negative. In the latter category,

where all history is negative and we have no record, we often write back to our examiner and state that, in view of the negative history and the applicant's age, we would like to have him see this individual again and question him further, in a discreet manner, regarding any illness or checkup in the past.

To date, considerable time and patience is needed to decipher some of the script shorthand or hieroglyphics, where various types of copying equipment are used and copies of the physicians' and hospitals' entire records are furnished.

When an attending physician tells his patient, our applicant, that his report to us should not be a cause for a rating, and a rating has been given and a complaint made, we write the attending physician with a view to giving him some facts to substantiate our action without giving reasons for our decision.

A survey of our fee situation for statements shows that 87½ per cent of statements in 1959 were paid for at the rate of $3.00 or less; 12½ per cent over $3.00.

The average cost for statements in 1959 was $3.30.

MODERATOR BICKNELL — Thank you very much Dr. Farnham.

In gathering information for this discussion, several companies were contacted. I appreciate the complete cooperation received from them.

A study completed by the Aetna in 1956, covered a review of 8,729 applications in which they obtained 1,350 statements. This represented statements in about 15 per cent of applications. There was no effect on the decision in 75 per cent of the cases; 12 per cent were favorably affected, and 13 per cent were unfavorably affected.

The London Life made surveys in 1956 and 1960. With the permission of Dr. G. R. Collyer, Table II shows the comparative

TABLE II

LONDON LIFE

Effect on Underwriting action

	1956	1960
More Favorable	3.1%	3%
Confirmed	86.5%	80%
Less Favorable	10.4%	17%

results of their two surveys. Although they have an increase in the less favorable category, there is some similarity in their surveys to those completed by State Mutual. Table III shows comparison of my own Company's studies of 1952 and 1960.

TABLE III

STATE MUTUAL

Effect on Underwriting action

	1952	1960
Favorable	3.7%	3.6%
No Change	82.8%	82.8%
Adverse	14.5%	13.6%

The findings of our two companies are interesting.

Dr. Vaughan will present detailed information on the questions raised earlier, namely: Are we asking for too many statements, and having too much correspondence with attending physicians?

DOCTOR VAUGHAN — Doctor Bicknell, you have observed that with the continued growth of our industry, especially in relation to the large increase in Health Insurance plans, there has been a continuing growth in the amount of correspondence with the applicants' physicians. This, of course, results in considerably more paper work for the clinician. It seems in order to discuss the question which you have raised: namely, are we asking for too many statements from attending physicians? This subject seems to merit some study for at least two important reasons.

Such a large number of A.P. reports are being requested today for use in the underwriting of insurance applications that the cost of these has come to represent a significant portion of our acquisition expenses. My company has been ordering in the neighborhood of 4,000 A.P. reports a month; this includes those for both life and accident and sickness. One can imagine what a large figure this must be for the whole industry.

Thus, the first reason for making a study is to determine the cost of A.P. reports in relation to the probable mortality experience. The second reason is that some of our good colleagues in private practice have indicated that the completion of so many A.P. reports has, at times, become a burden.

As far as the insurance companies are concerned, the ordering of these reports is certainly desirable if they are of economic value in our business. We understand also that private physicians are willing to furnish good reports, for a reasonable fee, of course, if they feel their information is necessary and of value in appraising their patients' applications. It follows then that we would want to know if the A.P.'s we are ordering are necessary, that is, of economic value to us, and if some are not necessary, which ones are not?

My Company completed a study this year which was designed to give us enough practical information on the value of our A.P.'s to answer the question: Are we asking for too many statements from attending physicians? The study was further designed to tell us in what categories, if any, we could safely dispense with requesting A.P.'s.

We reviewed 5,000 individual application files, each involving one or more A.P. reports; 3,500 of these were life cases and 1,500 were accident and sickness. Comments here will be restricted to life cases since we have not yet drawn any definite conclusions from the accident and sickness portion of the study.

The application files themselves were categorized as to amount applied for and age of the applicant. The breakdowns were as follows:

AGE
to age 30
31 – 40
41 – 50
51 & over
all ages

AMOUNT
to $15,000
$15,001 – $25,000
$25,001 – $50,000
$50,001 – & over

The A.P. reports themselves were categorized according to the reason they were requested and the time lapse from the occurrence of the impairment or checkup to the date of application. According

to the reason for the request, the breakdown was as follows:

Checkup without history
("Clear Checkup")
Checkup with history
Verification
Vague

Here, let me briefly define what is meant by these so-named types of A.P.'s. "Checkup without history," to be referred to as "Clear checkup," means the A.P. was requested for a "checkup" or physical examination admitted by the applicant who gave us no further details other than the date of the checkup. Also, there was no adverse information anywhere else in the file.

"Checkup with history" means an A.P. was requested for an admitted "checkup" but, in addition, either we were told of some impairment related to the checkup, or there was adverse information elsewhere in the file.

"Verification" A.P.'s are those requested to verify the history of a known impairment. Here, the applicant gives us history which is adequate for making an insurance classification and we send out the A.P. request, mainly with the intent of verifying what was told to us. The verification A.P.'s were broken down further into standard verifications and substandard verifications. The standard verification A.P.'s were those requested in connection with an admitted impairment which, at the time of initial underwriting, appeared to classify for standard insurance. The substandard ones were similar except that the impairment appeared to classify at a definite substandard rating, at the time of initial underwriting.

Although the term "Vague" A.P. was used in our study, these will be referred to in this discussion as "clarification" A.P.'s. "Clarification" (vague) A.P.'s were those ordered where there was history of an impairment, the nature of which was not definite, or the information relative to the impairment was not adequate for classification. By way of explanation, let me cite an example. If we are given a history of peptic ulcer without details, other than perhaps the date of occurrence, we do not have enough information to classify. Therefore, a "clarification" A.P.

is needed to tell us whether the ulcer was gastric or duodenal, how many attacks, whether there was hemorrhage, if surgery was performed, etc. Chest pain cases and those with impairments such as diabetes probably will always require clarification A.P.'s.

The time lapses from the date of occurrence of the impairment or checkup and the date of the application were broken down as follows:

0-1 year
1-2 years
2-5 years
over 5 years
not stated

In these 3,500 life application files, there were 4,140 A.P. reports. Please remember that only applications connected with A.P. reports were reviewed. It was our primary purpose to compare the cost of the A.P.'s in each category with their value. We, of course, knew our average cost per A.P.

To estimate the value of each A.P., we calculated the actual yearly substandard extra premium for which the A.P. report alone was responsible in a given case. Then this figure was multiplied by five, assuming a five year persistency. This gave us the dollar value of the A.P. for comparison with the cost. Naturally, we could only estimate the value of a decline; in such an instance we used the figure of $100.00 extra premium per thousand of insurance applied for.

Our study seems to justify two major conclusions. First, all in all, A.P. reports are extremely valuable. In fact, they are absolutely essential to a satisfactory mortality experience in our business as it operates today. For example, please observe these figures:

	No. AP's	AP's Contributing to action	Cost of AP's	Value of AP's Contributing
Clear Checkups	1,762	33	$ 5,109.80	$ 28,888
Checkups with history	447	53	1,296.30	62,611
Verification Standard	647	2	1,953.94	368
Verification Substd.	199	4	600.98	2,339
Vague	1,085	187	3,276.70	90,907
Total	4,140	279	$12,237.72	$185,113

Second, we can safely dispense with the requesting of over 30 per cent of the A.P. reports we have been getting. How is this that we can eliminate so many when, over-all, they are so valuable? The answer lies where we hoped it would. We found that in certain specific categories, A.P. reports are not necessary. Their cost exceeds their value. Therefore, we can justify dispensing with these A.P.'s; the result, a big savings in expense to the company and in time to our colleagues in private practice.

What are these categories? We find that they are in the area of certain clear checkup A.P.'s and verification A.P.'s (both standard and substandard). It is hoped that the following charts will give you a visual impression of the categories.

A separate chart (see figures 5, 6, 7 and 8) is presented for each age group to facilitate a quick visual impression. The total area of the rectangle represents all the A.P.'s we have been ordering. The light portions depict the categories where it appears the A.P.'s can be eliminated.

As one observes the charts for the different age groups, it will be noted that A.P.'s appear to become more necessary as the age of the applicant increases and as the amount of coverage requested goes up.

On this chart (figure 6), for ages 31 through 40, and on the

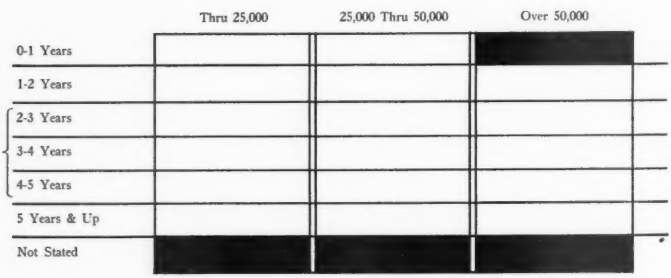


Fig. 5

two subsequent charts (figures 7 and 8), you will notice that A.P. requests are not being eliminated in certain areas of the two to three year group. Earlier, it was shown that time lapse was broken down in such a way that the two to five year groups were lumped together. After the preliminary study was completed, certain results were noted which led to making a second

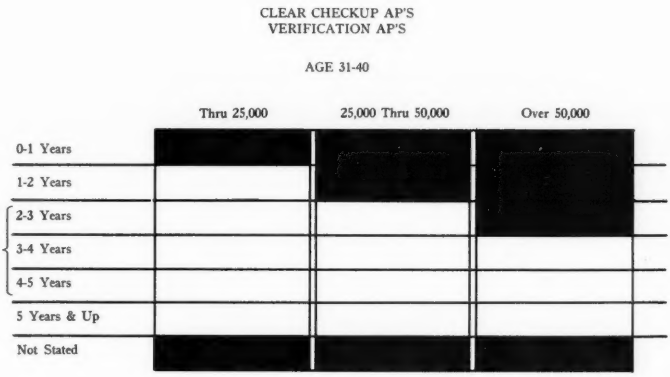


Fig. 6

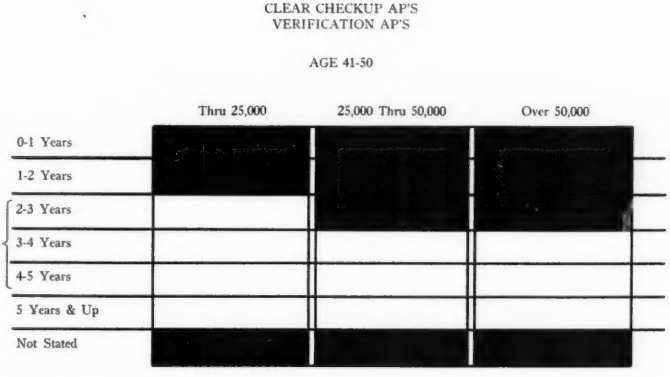


Fig. 7

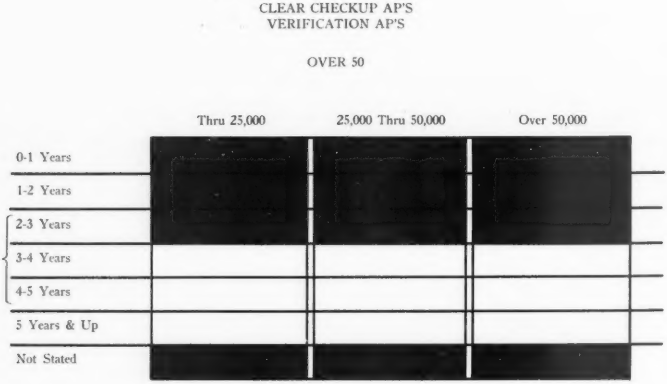


Fig. 8

review of the cases in the two to three year group. This second review gave evidence to suggest the need for continuing to request certain of these A.P.'s.

The statistics in this study seem to suggest that there is not as much fabrication by insurance applicants as might have been expected. Most of our routine verifications failed to reveal enough difference of information to change our action.

Before discussing further the A.P.'s which probably can be eliminated, it seems well to point out that we concluded we need all clarification A.P.'s for at least five years and all checkup A.P.'s with history for at least three years.

The statistics from our study relative to the A.P.'s for clear checkup and verifications, which we decided are unnecessary, show the result if those A.P.'s had been waived.

Number of A.P.'s waived by adopting these rules:

	No. Waived	Contributing to Action	Cost A.P.'s Waived	Value A.P.'s Waived
Clear Checkups	758	4	$2,198.20	$ 879.65
Verification (Std. & Substd.)	557	3	1,682.14	418.50
Total	1,315	7	$3,880.34	$1,298.15

You may be interested in seeing our new instructions for requesting A.P. reports.

RULES FOR ORDERING ATTENDING PHYSICIAN REPORTS ACCORDING TO REASON FOR REQUEST

Clarification: Obtain for at least five years.

Checkup with history: Obtain for at least three years.

Clear checkup or verification (standard or substandard): Order reports as indicated:

Age	Thru 25M	Over 25M Thru 50M	Over 50M
0–30	none	none	for 3 yrs.*
31–40	for 1 yr.*	for 2 yrs.*	for 3 yrs.*
41–50	for 2 yrs.*	for 3 yrs.*	for 3 yrs.*
over 50	for 3 yrs.*‡	for 3 yrs.*‡	for 3 yrs.*‡

* Also obtain all A.P.'s where date not stated.

‡ On substandard verification, extend A.P. ordering period to 5 years.

As a basis for evaluating this A.P. study, our average A.P. report cost of $2.90 was used to compare with the value of the A.P. At the time this study was in process, our minimum A.P. payment was $2.00. Since that time, our minimum has been increased to $3.00. Consequently, any projection of results of the study into future probabilities should be based on a higher average A.P. cost than the $2.90. We have taken this into account and our conclusions remain the same.

It is realized that the number of cases studied is not so large that anything has been proved beyond a shadow of a doubt. It seems, however, that there was enough of a sampling at least to give a fairly reasonable idea of where A.P.'s can safely be dispensed with in the future.

It is gratifying that this study seemed to justify new rules for requesting A.P. reports, especially since these new rules do two important things: They save the company considerable expense, and they permit us to cease bothering doctors with requests for unnecessary reports.

MODERATOR BICKNELL — Thank you very much, Dr. Vaughan.

Using comparable thinking to that mentioned by Dr. Vaughan, our study showed that statements costing $5,750 had a net value of $69,423, issuing a three year persistency.

In 1957, you heard an excellent panel discussion on professional and public relations. While we are not going to repeat that subject, there are some pertinent questions which should be answered. They deal specifically with the subject at hand and have a bearing on our professional and public relations.

Different companies have different methods of obtaining statements and following up those not completed promptly. Dr. Farnham, Metropolitan, covers both urban and rural areas. Would you tell us, Dr. Farnham, how your statements are obtained, and comment on the advantages and disadvantages to your system.

DR. FARNHAM — Our statements are requested after an authorization is obtained. The authorization form, which is always attached to the application, is signed by the applicant at the time the application is completed. When the application reaches the Home Office, if a statement is desired, the authorization form may be detached and sent with a statement form for a report from a doctor, hospital, or various governmental services. These requests for statements go directly from the Home Office to the doctors, hospitals, etc., in 52 per cent of the cases. In 19 per cent, the authorization is sent to the District Office to be picked up by the Home Office Representative who, in turn, obtains the desired report directly from the doctor or hospital. In 29 per cent, the authorization is returned to the District Office, where further data is needed regarding the name of the doctor, hospital, etc., especially where only a checkup is admitted. When these data are obtained, the request is forwarded from the District Office directly to the attending physician or hospital. The Home Office Representatives are used in only 20 of the larger cities where they are able to contact the doctors or hospitals directly and obtain more detailed reports than would otherwise be given on the statement form. There are different statement forms, i.e., regular, diabetes, asthma, premature infant.

Our regular statement forms are sent in duplicate so that a second copy can be kept by the doctor or hospital. Often the duplicate forms are made out in longhand with a complaint re-

garding the extra work. Some doctors keep the duplicate form and comment that they are pleased to have a copy and that it is about time we did something of the kind for the attendant.

If no report is received in the Home Office in 7 to 10 days after the statement request is sent out, depending on the amount of the application, a statement chaser is sent to the District Office. The District Office in turn contacts the doctor or hospital regarding the requested report. In a certain percentage of these cases, where no report is received after several weeks, the application is filed "No Action."

Our Underwriting Committee has just given its approval for the use of Health Insurance Council Form. This will be used just as soon as our present forms are depleted.

About one-quarter of the R.A.P. statements are requested on non-medical applications. At present, statements are requested on about 6 per cent of the applications.

MODERATOR BICKNELL — Thanks, Ray. Dr. Vaughan, would you care to comment on your method of obtaining and following up statements?

DR. VAUGHAN — Yes, Doctor Bicknell, I'd like to do this because we have the impression that our experience along these lines has improved recently as a result of using the new uniform form as sponsored by the Health Insurance Council. We started using the H:I.C. form July 1 of this year. Also, in line with the Council's recommendation, we always attach a signed authorization and we always pay a fee for the completion of the form, even if we are not billed. One other item, perhaps worth mention, is that we try to preserve uniformity by not asking any specific questions other than to show, by a very few words in the heading, the particular history prompting the inquiry. Our form reads — "Please comment in particular regarding — ." Here we may type "Checkup 1959," or "Ulcer 1958," or whatever the stated history relative to that A.P. may be.

We have been using the H.I.C. form now for about three months; we have sent out some 12,000 such requests. Our impression, with this limited experience, is that we are getting more information which is better summarized. We believe we detect

prompter replies from those doctors who recognize the value of uniformity as it relates to this form.

MODERATOR BICKNELL — To prevent irritation to attending physicians and hospitals, we send a stamped post card addressed to our agency office, with our standard form. The physician or his secretary mails the post card, identified by the agent's name and the applicant's initials, when the report is mailed to us. We have found this method very helpful since it informs the agent that the report is on its way to the Home Office. If this idea appeals to any of you, I shall be glad to give you a copy of our post card, for such use as you may wish to make of it.

These days there is a tendency to delegate more and more. It seems to me that in writing to doctors, and particularly to applicants' physicians, we must use caution. Dr. Farnham, will you give us your thoughts on this subject.

DR. FARNHAM — I heartily agree that we should use extreme care and caution in delegating to laymen the authority to write to the applicant's physician, or to any physician for that matter. We have developed a fairly complete file of semi-form letters so that there is a minimum of opportunity for our correspondence clerks to offend or err in requesting the desired information. Often the application with an R.A.P. attached is referred by a Lay Underwriter to the Medical Underwriter to see if action can be taken or whether they care to write to the attending physician.

MODERATOR BICKNELL — Unless you happen to be running a company in Utopia, I presume you have all received complaints from physicians regarding the handling of confidential information. Dr. Vaughan, will you tell us how the Occidental handles such complaints.

DR. VAUGHAN — We have been extremely fortunate in that we have had relatively few complaints from attending physicians, regarding the handling of confidential information. One of the Medical Directors takes the time to review the entire file and write a personal letter to the physician. Of course, we attempt to handle our confidential information in such a way that it is not given to any unauthorized individual, so that there will be no repercussions. But if we do get a complaint, we then try writing a diplomatic letter.

MODERATOR BICKNELL — Perhaps we are too busy, or think we

are, to take time to acknowledge letters or reports from attending physicians. In an election year, when the scepter of socialized medicine is prominent, it behooves us to expend ourselves in developing good public relations with our fellow physicians. To this end, I ask myself, does anyone ever write a letter of appreciation to an attending physician? Dr. Farnham, you have a large staff, as well as a substantial volume of business. Do you or your associates ever write a letter of appreciation?

DR. FARNHAM — Yes, we have written letters of appreciation when we have received particularly long and complicated reports. We are more apt to write a letter when the one received permits us to take favorable action than when a rejection or rating results from the information furnished by the attending physician.

MODERATOR BICKNELL — That's an interesting comment, Dr. Farnham. I recall your mentioning a practice which you have of sending to the applicant's physician a note regarding your findings in connection with the declined cases. Would you explain this situation, as I believe it is a proper subject to include in this discussion, "Correspondence With the Applicants' Physicians."

DR. FARNHAM — This service which the Metropolitan has is not unique, but has been greatly appreciated by many applicants. We first drop a note to the applicant indicating that, although we have declined his application for insurance, we would be willing to furnish the results of our examination to his attending physician, if he so authorizes us. The form letter which we send, provides for the applicant's signature, and the name and address of his attending physician. On receipt of the authorization, we send a statement to the applicant's attending physician, outlining the significant findings at the time of examination. This service has been well received. Where the attending physician does not agree with our findings, he may send us his findings, which usually results in further consideration, and frequently, an additional medical examination.

MODERATOR BICKNELL — So far, we have been thinking of correspondence from the standpoint of the insurance industry. We must also consider it from the standpoint of the applicant's physician.

Any physician is faced with many forms, often of different

format, which he must complete for various purposes. For some forms he is paid. For others, he is not paid.

Some forms will help his patient receive benefits for an illness or accident. Other forms will help or hinder his patient with an application for life insurance.

To encourage physicians to complete forms promptly, a uniform form for underwriting has been developed. The form is simple. Eighty-four companies have adopted it. We urge that you give it full consideration so that we may all get prompt replies for physicians with whom we correspond. You have received a copy so we will not go further in discussing the uniform form.

We have discussed many phases of correspondence with the applicants' physicians. My two associates have given you excellent presentations as to studies completed in their own companies. We do not maintain that we know all the answers, that we have asked all the questions or that we have covered the subject in exactly the same way you might have covered it. Since you have been most attentive, I suspect that this subject has been of interest to you and that some of you would like to ask questions or make your own comments. At this time, we would welcome your questions or comments.

DR. NEWELL R. KELLEY [Bankers, Des Moines] — The figures that have been given this morning as to the number of attending physicians' statements are rather staggering; per month, for example, four thousand. It may be that I am in a company that is halfway between the giant and the small companies so that we four physicians can handle almost every letter that we write to doctors for information. That, to me, seems to indicate that, perhaps, we can keep down the number of statements we request. I think it is in the hands of the underwriters. This large number must be far more than is necessary.

It might be possible to establish a rule in companies that any statement, before it is sent by a lay underwriter, could be checked or verified with a doctor, who may not see the case originally. This might cut down the number. But it is startling to me, for a company of my size, doing $250,000,000 a year, to have a number of that sort. If I can recall the number we are sending out, it may be about 350 to 400 a month only.

MODERATOR BICKNELL — Thank you, Dr. Kelley. Did those of you in the back of the room hear Dr. Kelley's comments? Well, in substance, he questions the number of statements referred to in Dr. Vaughan's paper, where Dr. Vaughan mentioned the Occidental getting four thousand statements a month, or requesting them. I think one thing we've got to bear in mind here is that that covers both their life operation and their sickness and accident operation.

I think another thing — and I am going to usurp Dr. Vaughan's prerogative here for just a moment — I think that a fair percentage of business in the Occidental arises from brokers rather than from their own full-time agents, and this may have something to do with the number of statements which they request. I'm going to put him on the spot, because I don't think he knows; I'm going to ask him, but, Dr. Vaughan, do you have any idea of what percentage of statements you are asking for in relation to the number of applications?

DR. VAUGHAN — Yes, Bick, I do. May I say just one thing before giving you that percentage? One other factor which causes our company to order more AP's than some other companies may is that certain of our branch offices and general agencies have the privilege of ordering the initial AP and, naturally, they order more than they should.

Our last estimate of percentage of AP's ordered was 42 per cent; in other words, we order AP's on 42 per cent of the applications. We believed that that was too high, and that was one reason for this study which we made.

MODERATOR BICKNELL — Thank you. Are there any other questions or comments?

DR. KELLEY — I hate to be in the picture so much, but, having been in practice now not too many years ago, I can recall the irritation that I had on occasion when I received a request from a company, perhaps before the day of the HIC form, wherein a layman asked me, in non-medical language, for some specific information. That is the one reason that I kind of maintain my comment that I think it best, if possible, that any letter sent to an attending physician be worded medically, properly, and over the doctor's signature. I think it is rather irritating to a doctor

to receive a request in terminology that is not medical, and may not be signed by the physician.

I am just referring to laymen taking from the application the statement of the applicant that "I had a nervous breakdown." Well, the nervous breakdown isn't too bad, but there have been things like "I went to the doctor for stomach pain," and so on. I think that we as physicians can word that request a little better to an attending physician, so that it won't be as irritating. That's the only reason I'm sticking to my comment. I think that we can reduce the number of attending physician's statements if they are handled more and more by the doctor rather than by the lay underwriters, if possible, according to the volume of business.

MODERATOR BICKNELL — Thank you, Dr. Kelley. I'm not sure but I suspect, from the scarcity of questions or comments, that things go a lot better in your operations than they do in mine, or you're getting anxious to eat; I'm not sure which.

Well, it has been a lot of fun for me. If there are no further questions or comments, may I take this opportunity to thank my associates, Dr. Farnham and Dr. Vaughan. During our discussions, we have indicated three things:

1. That correspondence with the applicant's physician is necessary.

2. That such correspondence is economically sound when carefully selected by each individual company.

3. That use of a uniform blank will reduce delays and complaints from physicians in practice.

PRESIDENT WILLIAMS — Thank you very much, Dr. Bicknell. I know we are all pleased, and I hope that Mr. McBurney is pleased, with the plug for the Health Council form.

I would like to go back a generation to begin the introduction of our next speaker. His father was my Professor of Anatomy but his interests and his lectures covered a much broader field than that found in *Gray's Textbook* or *Spalteholtz's Atlas.*

It is only natural that a student of his would follow, with more than the usual interest, the medical career of his elder son.

Locally, the son's education is described as attending The High School and The University. Translated this means that he went

to The Episcopal High School in Alexandria, Virginia, and then to Mr. Jefferson's University in Charlottesville. This was followed by internship at Johns Hopkins, Asst. Residency at the Boston City, and Residency and Staff appointments in Cincinnati. Since 1948, he has been Professor of Medicine and Chairman of the Department of Internal Medicine at the University of Iowa. His writings, like his father's interests, cover a broad field. Medicine is the central theme but the approach might be clinical, educational, philosophical, historical or even poetical. In the past, I have read book reviews to find out whether I wish to read a book. Now I find that I read the book reports, particularly those in the Archives of Internal Medicine, because they are written by our speaker. Dr. William Bennett Bean.

SOME HISTORIC SIDELIGHTS ON MEDICINE'S FORGOTTEN MAN — THE PATIENT

WILLIAM B. BEAN, M. D.
Department of Internal Medicine
College of Medicine, University of Iowa
Iowa City, Iowa

May I begin my remarks by warning you that I have no grand new truth to tell you; and that I have undertaken a task beyond the compass of a dinner address. I am out beyond my depth. I cannot remember what made me accept the invitation in the first place. Thus needing inspiration, I borrow the words of a negro preacher invoking divine assistance as he warmed up for his sermon.

"Oh, Lawd, give Thy servant de eye of de eagle and de wisdom of de owl; connect his soul wid de gospel telephone in de central skies; 'luminate his brow wid de sun of heaben; pizen his mind wid love for de people; turpentine his 'magination; grease his lips with possum oil; loosen his tongue wid de sledge hammer of Thy power and the honey of Thy words; 'lectrify his brain wid de lightnin' of de word; put 'petual motion in his ahms; fill him plum full of the dynamite of Thy glory; 'noint him all over wid de kerosene oil of Thy salvation, Oh Lawd, and set him on fire. Amen."

My theme is a commentary on medical history seen through the eyes of a patient. Learned volumes have been written about the history of medicine and physicians through the ages of recorded history, but not much has been said about the patient. He has been neglected in the historian's excitement about the physician or the physician's fascination with himself. The concern of contemporary physicians interested in medical history is the large problem of MEDICINE rather than the patient. The importance of these attitudes is realized when one takes thought about diseases and patients. Concepts of illness change with time and circumstance. Each epoch and each society produces its own illnesses, for the most part not wilfully, but nonetheless, effectually. Early

man fought starvation, cold, wild beasts, and his neighbors. He lived hard and died young. Life in cities caused diseases of crowding and unhygienic conditions. Today, the triumphs of public health are producing a society dominated by the elderly and the old, and all the diseases impervious to the impersonal attention of natural selection. Smoking too much may cause cancer of the lungs but, if this were proved absolutely, many people would go right on smoking. It is well established that obesity is a real menace, particularly after the middle years of life. Knowing this, few fat people reduce successfully and fewer stay reduced.

In an uneasy age we seek Nirvana or Panacea, wanting to eat our cake and have it too. Our frayed nerves we dope up with tranquilizers, our fidgets we disguise by chain smoking, our fears or anguish we drown in alcohol. We cannot face the world. Psychoanalysis is built upon self-centeredness. The modernistic excesses of progressive education seek to adjust each person by self-expression which has backfired in an uneasy yearning to conform, to be other-directed. Beguiled by the cry of the hucksters, we swallow vitamins and patiently await a high octane feeling which never comes to quiet our knocking motors of body, mind and spirit. Assailed on all sides we soothe with sedatives, then cancel out their effect with a buck-you-uppo and then need more pills to fight off the side effects of our remedies. And then still more to remedy the remedies of remedies. In our do-it-yourself culture, our veneer of self-confidence helps create diseases by applying self-diagnosis and self-treatment, unmindful of the unhappily prevalent sequel — self-sacrifice. So we proceed, creating for ourselves our current brand of havoc as our forefathers did before us.

Come with me on a tour of history, picturing a patient with the same signs and symptoms, as he might have fared at the hands of physicians in different places and at different times. You must permit me some latitude and condone the superficial and hurried view. Our patient, an industrious, upright and vigorous lad of twenty, has always enjoyed good health. He is seized with pain in the pit of his stomach. Nausea gives rise to vomiting, some headache, a sense of increased warmth and sweating. After a sleepless night, the pain has moved down to the right lower aspect

of his abdomen which he protects lest any movement make it worse. Today, we would judge that he has acute appendicitis until proved otherwise.

I. The first scene goes back twenty-thousand years — among the Cro-Magnon tribes, ranging the Pyrenean hills of southern France. Domestication of plant and animals is just beginning. Berries, leaves, fruits and wild animals provide uncertain balance between feast and famine. Our patient seeks out the wise man of the clan. In the cave of the Three Brothers, the priest-physician holds forth in a ceremony containing the germinal elements of clinic, church and court. With his retinue of apprentices, he leads a procession around the sufferer, whose complaints were barely heard as he was elevated on a crude couch. Chanting, beating rattles and waving ritual feathers and beads, they dance in rhythmic chorus, now solemn, now frenzied, as the established ceremonial proceeds in its customary and well-practiced sequences. At length, as the intensity of excitement rises, the patient is borne on a litter into the depths of the cave. Suddenly acolytes with burning torches bring the patient before the painting of an earlier physician-priest, clothed in a deer skin and wearing on his head as part of his paraphernalia the deer's antlers. Down from the wall he peers with intense hypnotic stare as the lad stands erect. Suddenly all is silent. Then abruptly all the torches are extinguished.

This entirely new experience in the sacred part of the cave from which all save physicians were excluded, gave our patient a demonstration of power and magic. He knew of the powers of the shaman, but not his therapeutic methods. The spirit of the evil which had entered his abdomen was exorcised. The strength of the tribal doctors had beaten one of the horde of evil spirits which were forever lurking in wait to get control of a victim. Our patient had shared in mystery and had had transfused into himself ecstasy and relief. His knowledge of other cures crowded out any thought of the many failures he knew about. He participated in an act of faith which was the beginning of convalescence leading to recovery. There had been no physical contact, no examination, no taking into the body of any magic material. The priest-physician was the treatment, the ritual was the medicine, the magical drama brought the cure.

II. Now the scene changes to Egypt some six millenia ago when Neolithic man, finding copper, forged the instruments which raised primitive man out of the morass of the Stone Age. In the sheltered Nile Valley, perennial floods led to the development of systems of irrigation. Relatively unexposed to marauding enemies, man was able to invent what we call civilization. Later it spread to other lands around the Mediterranean. Not only do we find great monuments, the pyramids, the sphinx, and various technical arts and crafts developed to a high level, but here we see man's early strivings after righteousness, his moral awakening, faint glimmerings of a conception of social justice and the rights of the individual. The Egyptians were not just preoccupied with life on earth. Their attention to death and the preparations for survival of the individual by embalming enabled the priest-physician to obtain special information about the body. This could be used in dealing with his living patients. No one believed that disease and death were natural. They were caused by the invasion of man by invisible malignant spirits which caused him to sicken. By this means, the soul of a dead man could assail the living, either by some cunningly contrived entry into his system or by attacking him with overwhelming violence from outside. Once the evil spirit had established a foothold, he might scour the skin, addle the wits, suck the marrow, crush the windpipe, drink the blood, strangle the lungs, break the bones, gnaw the intestines, or devour his victim's flesh in a wasting disease. It is perfectly obvious that the priest-physician must first discover the nature of the spirit in possession. This was easy if the spirit's name could be learned thus obtaining power over it. Then, by a direct attack he could destroy it or remove it, but only by exhibiting a more powerful magic. Thus, skill in making amulets and saying incantations was highly developed. The lore of astrology, mathematical arts, and religious ceremonies all had a very important place during the time when we see the rise of Imhotep, whom Osler called "the first figure of a physician to stand out clearly from the mists of antiquity." By now, we find the magical approach to therapy beginning to employ animals' saliva, urine, bile, blood, feces, and various parts of the animal body, boiled, dried or powdered. They make up a remarkable pharmacopia. Some, such as dried thyroid and pituitary extract, survive even to this day. Think of the

marvelous properties which the eager patient attributed to the elephant, the lion, the rhinoceros, the crocodile, or the 79 separate preparations made from the hyena. Alchemy and chemistry are showing their first awakening. Specialists had already splintered off so many small fractions of man's body that they were subject to lampooning.

So, our patient presents himself to one of the priest-physicians in the temple of the Sun God. The physician in a wig and clean sparkling white linen robe listens intently as he explains his aches, pains and uneasiness. There is immediately great consultation in the book of the stars, or perchance more clinically, a study of the heavens themselves. The auguries and horoscopes provide an idea of prognosis and govern therapy according to the readings. Sweats, unctions, baths and diuretics were used without recourse to enemas, purges or vomits. The priest-physician with his scarab seal presides over the ritualistic administration of various treatments. Fortunately for our patient most of them were relatively neutral. Although he continued very ill for a time his fever gradually subsided, the pain in his side slowly disappeared and he was restored once again to the ways of health. So fascinated had he been with all the procedures that he inquired of the priests how he might become a novitiate and aspire to their position of power and respect.

III. The scene now changes to Mesopotamia where nomad tribes, moving about in the wilderness, had come to see Jehovah as the one and only God. Despite the fact that there were many tendencies to relapse and worship the golden calf of their neighbors, the golden Cadillac of the day, the rise of monotheism to its eventual form lifted the Jewish people to heights never reached by others in Mesopotamia or anywhere else in the world. Originally the rather crude medical practices of the Jews were in the hands of the priests, but, very early in their history, medicine and religion separated for reasons we know nothing of. Perhaps the physicians whom Joseph commanded to embalm Jacob, his father, were Egyptian, but at least the physicians had become a separate caste or group in that society. In contradistinction to the Egyptian practice of ultraspecialization, the Jewish physician was a general practitioner. He was called a "rôphê", a combined internist, surgeon, ophthalmologist and dentist. Though a priest might be

called in case of illness, the rôphê had a well established part to play. As the Scriptures tell us, when King Asa was "diseased in his feet until the disease was exceeding great yet in his disease he sought not to the Lord but to the physician." Despite the fact that some small surgical skill was obtained in the practice of circumcision, the Jewish custom of interdicting other surgical operations or any dissection of the dead kept medicine at a primitive level. Magic played a large part in the approach to ancient Hebrew healing whether in the hand of priest or physician.

Moses held up the bronze serpent in the wilderness as a symbol of magic. If a man had been bitten by a poisonous snake "when he beheld the serpent of brass, he lived." Indeed the priests were not beyond using magical powers against their enemies. In his renowned contest with the Egyptian sorcerers, Aaron turned his rod into a serpent. He and Moses, by stretching out a hand or a rod, called down plagues of locust, frogs, lice, flies and some epizoötic among the cattle of Egypt, thus giving us another example in the ancient lineage of biological warfare. Physicians gained much experience, and folk knowledge may have led the prophets to interpret or claim that ordinary events of the natural history of disease were miracles.

Our lad, a shepherd boy, develops his pain, feverishness and chills as he sits marvelling at the stars as he tends sheep in the traditional manner of ancient nomadic tribes. First of all he goes to his father who takes him to the priest, but the priest, after the custom of the day, refers him to a physician. The physician's treatment was expectant. He was given barley gruel and goat's milk. Cooling compresses were applied. After a troubled convalescence he went on to make his recovery. We may be sure that the physician received his fee because according to the book of Ecclesiasticus, the son of Sirach says "Honor a physician according to thy need of him; for verily the Lord hath created him . . ." "Then give place to the physician for verily the Lord hath created him; and let him go not from thee for thou hast need of him. There is a time when in their very hands is the issue for good." Whether the writer was dealing with moral rectitude or medical health is of not much importance since in either case it was recognized what the physician had in his hands—"the issue for good." Thus in ancient Palestine the moral aspects of medi-

cine were retained and grew even though separated from religion.

IV. The rise of rationalism in Greece, the demonstration for the first time that objects had qualities which could be separated from them and dealt with independently, a solid intrest in humanity with more emphasis on the body than on the soul, were flowering in ancient Greece in the time of Hippocrates. One result of this emphasis was that care of the body to promote health got as much attention as care of the sick when health had broken down. The strong emphasis on the moral responsibility of physicians is seen in Hippocrates' list of requirements for admission to the medical school of his day. "Whoever is to acquire competent knowledge of medicine ought to be possessed of the following advantages: a natural disposition; instruction; a favorable position for study; early tuition; love of labor; leisure. First of all a natural talent is required for when Nature opposes, everything else is vain; but when Nature leads the way to what is most excellent, instruction in the art takes place, which the student must try to appropriate to himself by reflection, becoming an early pupil in a place well adapted for instruction. He must also bring to the task a love of labor and perseverance, so that the instruction taking root may bring forth proper and abundant fruits."

With the slow advances made by an interest in and regard for the physical body and a belief in rationalism, Greek medicine slowly began to shake off some of the mysticism, superstition and religious ritual which we believe had been at the center of medicine in the primitive societies of remote antiquity. Though state religions were becoming sophisticated, even effete, everywhere in Hippocratic medicine one finds common sense trying to avoid philosophical or theological commitments. Thus, we have great emphasis on the practical nature of an art having as its highest goal the benefit of the patient. Collection of facts, the accrued evidence of the senses, empiricism, experience, and very little philosophic speculation were the distinguishing marks of medicine in the time of Hippocrates. Disease entities are being recognized and defined. Here for the first time we find the belief that health and illness are natural processes. There is nothing magic or supernatural or mystical about them. They can be comprehended within certain limits by observation and study. Even epilepsy was no longer thought of as a sacred disease.

Nearly 26 centuries ago, our patient, complaining of the signs and symptoms of acute appendicitis, is admitted to a rather formal court in an ordinary home, not to the shrine and temples of Aesculapius, though many contemporary physicians still practiced within the precincts of some temple. Our patient comes to Hippocrates himself under his great sycamore tree and tells him his symptoms. He is asked about the time sequence of the symptoms, for special days have special importance. He is questioned about exposure to unusual foods or water, or unusual meteorological or even regional and geographical influences. This is followed by a direct examination. A regimen of rest, light diet, and temporary freedom from the ordinary vexations of everyday life is prescribed. Prognosis is developed in terms of the progress of the patient on specific days. He is allowed to rest. He is observed. Very little specific treatment is offered. There was no divination, no looking at the liver of a sheep slaughtered for this purpose, no charms, incantation, astrology or horoscopy. To be sure, the four elements of Empedocles, earth, air, fire, and water, had become the cornerstone of the humoral pathology of Hippocrates. Phlegm, blood, yellow bile and black bile became established in a sufficiently mysterious and unrealistic system which dominated and benumbed the slumbering mind of man for nearly 2,000 years. Witness our words, phlegmatic, sanguine, choleric, melancholy. Still, despite all this confusion, there was a real recognition of the *vis medicatrix naturae,* the natural healing force of Nature. Our patient is left very much alone. The treatment is not worse than the disease. He goes on to a slow but complete recovery.

Thus, after unmeasured centuries of vague and meddlesome interference, restless speculation and error sustained by convinced authority, Hippocratic medicine begins to introduce studious habits into the flimsy intellectual life of mankind. And at the same time a code of honor, a creed for internal self-government was established by a group of men devoting themselves to helping their fellows. We can be proud that physicians, even as they were making a start toward science, became the first and remain the only profession with a self-imposed creed for monitoring their own acts. Its failures remind us that physicians are human, not superhuman.

V. Galen, a Greek (physician) in Rome, is perhaps the only physician who ever combined really great capacity as philosopher, experimenter and observer. He was a true pillar of medicine. In him for the first time we find observation, record keeping, analysis, and experiment. He examined and treated patients, learning by trial and error. He traveled widely, lectured wisely and wrote prolifically. He was vastly in demand as a healer even though he was known to dissect pigs and monkeys which, perhaps naturally but too readily, he assumed to be replicas of man. His best known patient was a lady with severe emotional trouble. She had neither fever nor fast pulse, but great general malaise. During casual conversation, Galen mentioned the name of a certain actor, Pylades. He noticed that her pulse quickened, became irregular, and her breathing was troubled. The next day, under the same circumstances, he mentioned another actor. No change occurred; and again another one on the third day without effect. On the fourth day, he mentioned Pylades' name again. Her pulse quickened and became irregular. Thus, even this early, psychosomatic ideas were tested by the scientific method our neo-clinical laboratory men think they have discovered. Naturally, Galen concluded that she was in love with Pylades and prescribed the only known specific cure for such a disorder. No wonder he was in demand.

Galen made war on the theoretical practitioners of the day. Though he was an eclectic he did not have the simplicity of the Hippocratic school. He had great faith in drugs. He collected plants from all over the world and dispensed his own medicine in an apothecary shop he operated in the Forum. His formulas, called Galenicals, were often really effective. The inferior position of physicians in Rome is indicated by Cato's diatribe against them. It would seem that *they* as well as Carthage must be destroyed. Cato prided himself as the inventor of the most supremely simple form of therapy ever known to medicine. He believed that cabbage was a specific for everything—eaten raw, cooked, used as a poultice, rubbed in, made into extracts, elixirs, and infusions, dried or powdered. Not only would it cure anything, it was an all-powerful preventive. Cato loved cabbage. Cato hated physicians. He believed that they catered to weakness. The sturdy Romans should be tough enough to go it on cabbage

alone. None of your fancy new-fangled Greek rubs and pomades. Most physicians of his time were slaves. They were becoming powerful and often quite wealthy. Galen did much to elevate medicine from its very low level. He made it respectable and almost made it scientific. But his word was not free from error and, bad with good, was accepted by the often slumbering intellect of European medical men as dogma, as THE TRUTH, for fifteen hundred years.

When our patient approaches Galen, he finds a sympathetic though extremely busy physician, who questions him intimately about the details of his illiness, examines him carefully, and, then prescribes a concoction of several herbs with instructions for brewing them together after mixing them according to a very precise program. Then he gets minute details for taking the remedy; hours, doses, and a regimen of light diet and rest. He receives more medicine than attention, and some toxic, and all nasty. He grows worse and dies. In such wise false science is more disastrous than cautious ignorance.

VI. Man and his wars have made unholy partners of physicians and soldiers. From many a war has come some pitiful by-product of medical advance. Before the modern age, surgery was confined almost entirely to the blitz surgery of trauma. Occasionally, brilliant operations might save the life of a person by spectacular amputation or ligation of an artery. Too often it was a cruel mess of pus and pain, blood and stench, decay and death. Hugh, or Hugo of Lucca, was a surgeon of the Crusades. He got an immense experience in practical surgery. Ultimately, he went far beyond what he could have learned on the battlefield. Hugo, according to his son and pupil Theodoric who wrote a combined textbook and biography about him, operated on the cranial cavity for removal of pus from an abscess, opened the thorax to drain empyema, and did a great many operations for hernia, repair of fracture and such like. His operations on the abdomen were many, variable and unique. He insisted that when the intestines had been punctured they must be sewed up. He used the windpipe of animals like a Murphy button which was evacuated after healing had occurred. Modern antisepsis was heralded in the employment of flax or linen cloth previously soaked in strong wine to dress wounds. Healing by first intention was sought and real-

ized. The later heresy of laudable pus was not subscribed to. He had anesthesia of a sort in a combination of mandragora, opium, wild lettuce, and hyoscamus. Sponges, saturated with tinctures of these materials, were dried in the sun and stored. Anesthesia was produced by placing a sponge in boiling water. The patient inhaled the fumes.

The patient's nutrition was looked after with the most scrupulous care as is indicated by the following quotation from Theodoric's book—"Since therefore Nature herself cannot bring about the manufacture of good blood without proper nutriment, nothing avails more in the healing of small as well as great wounds than the care of the nutrition of the patient. Physicians must above all not be ignorant of the kinds of food materials the wounded man must be fed in order that a suitable diet shall bring about a restoration of health and a renascence of flesh and restoration of the continuity of the wound." Here certainly we have striking anticipations of modern surgery.

Our patient comes now to Hugo of Lucca who is freshly returned home from his most recent campaign in the Crusades, full of the new knowledge he has gained from his rich experience without a G.I. Bill. He is proficient in the technical dexterities which practice and experience alone can give. The patient is examined. He concludes that he has some disease in his right lower abdominal quadrant. Rest and diet are prescribed. After several days an abscess is suspected. Anesthesia is applied according to their method. Our patient, in a state of partial narcosis, has his abdomen opened. By this time an abscess has indeed formed and it is evacuated. Thanks then to careful nursing, sweet clean dressings, and appetizing foods, our patient is slowly restored to health. This is the first time that what we consider to be the proper modern therapy has been approached.

VII. We tend to take a very dim view of medicine in the Middle Ages. We frown upon its scope and practice, its customs and as we say its delusions. Still with the rising of the universities came ultimately the breakthrough of the Renaissance and out of this crack in the occluded intellectual front arose experimental medicine. Medicine was the first of the biological sciences to take on modern clothing. It was the first science. For a while it was

the only one. Medieval practice was saturated with the four humors and the four corresponding temperaments, sanguine, phlegmatic, bilious, and melancholy and obsessed by the mystical number of seven, the natural things of the body, the elements, the temperaments, the humors, the members, the faculties, the functions, and the spirits. They confused men's minds because they were intangible, subjective, and had no predictive values. The proper relationship of the six non-naturals was needed to preserve health. 1) air; 2) food and drink; 3) activity and repose; 4) waking and sleeping; 5) retention and excretion; 6) the passions. Disease resulted from changes in the composition of humors or the relations one to another. If they were known, the indications for treatment could be figured out. The humors must be cooled, heated, strengthened, tenuated, or purged; but how to find out in what way things were amiss. Here we find restored to respectability astrology spawned in the lost antiquities of Babylon and Egypt, and divination, the reading of omens. By these two methods the up-to-date physician of the Middle Ages thought to judge the nature of what was wrong with his patient and what was needed to correct it. Although the Church looked askance on astrology, it was welcomed by the courts, the universities and, of course, demanded by the populace. At the end of the Fifteenth Century and into the Sixteenth, "Prognosticons" were being published by the universities and edited by those who held jointly the title of Doctor of Medicine and Professor of Astrology. As late as the beginning of the Eighteenth Century in Paris a thesis discussed "whether comets were harbingers of disease" and another "whether the moon had any sway on the human body." But the doctors of the long robe, debating and arguing about questions on which no evidence could be brought to bear, frittered away mighty talents in dialectical immaterialism. In the high stratosphere of their wild speculations they escaped complete chaos only by rigid adherence to the rules of logic. But within their rules the result inevitably was foreordained by the premises and if these were wrong, as they generally were, then error necessarily resulted. While this method of thinking preserved intact the opportunity for the rebirth of rationalism introduced long ago by the Greeks, there was no new medical idea to stir these men who had succumbed to the racy excitement of disputation unencumbered

by the stubborn resiliency and pliability of facts. The sick man was approached not directly but by the laboratory study of the urine, a preview of our latter day, modern day, heresies. This study was merely an inspection without any test — a wink test, not a sink test. It added no more than that most ancient and original laboratory procedure — the examination of the liver of a sacrificed animal. The men of the long robe, supreme dialectitians, held in awe and respect by those who knew no more than to give credence to their elaborate hocus-pocus, treated patients whom they had never seen after they had studied horoscopes, and inspected the urine.

Our patient in the Paris of the Fourteenth Century sends his urine to the professor with the required fee. When it had been studied according to the ritual of the day, he received a prognosis based on the horoscope, written in Latin. These inscriptions themselves were supposed to have magical qualities. The patient was not seen at all by his physician. As he grows sicker and sicker he loses faith in the professor of the long robe. He goes to an itinerant barber-surgeon for help. The barber-surgeon is a skilled though unlettered practitioner. He has seen much illness. He has learned by dint of long trial and error that the least done is soonest mended; so he puts our patient to bed and gives him a light diet. He is removed from the close quarters of the city and sent to the country for slow convalescence where he goes on to make a complete recovery.

Those who, in today's give and take amongst surgeons and physicians, feel inclined to cast aspersions upon the craft and craftiness of surgeons must remember the barber-surgeon of the Middle Ages, combining the role of physician, nurse, orderly, apothecary, surgeon, and barber. He kept alive the spark of medicine as a practical art which would have been extinguished had it been left in the hands of the professors, the doctors of the long robe, men whom I must sorrowfully confess were the internists of the day. For this we must be genuinely grateful.

VIII. But now medicine again comes out of the bewildering gumbo of superstition, magic, divination, and astrology — therapy with unicorn's horns and puppy dog's fat. One of the men most influential in providing the cutting edge for this new advance was Jean Fernel. His life and contributions I have alluded to in

other papers. Suffice it to say that though deeply religious he saw no evidence that magic ever intervened in the natural order of health and disease. He did not need to look for unnatural causes but to look more deeply for natural ones. By removing the intrusion of magic from the operation of nature, he enabled observation and experiment to take their rightful place in medicine; and within two generations he was followed by Harvey, the first experimental scientist of the modern era.

But in addition to excluding magic, the operation of unnatural forces in producing health or disease or in curing disease, Fernel likewise excluded superstition and the horoscope. He was not able, as his contemporaries were, to talk himself into the belief that the failure of predictions based on the horoscope indicated an inadequacy on the part of the predictor. He made observations. He demonstrated that an experienced physician did much better predicting with his own wits than he did when he consulted the stars. These two profoundly heretical innovations of the day might have brought Fernel into serious trouble with the church had he not been an extremely successful practitioner, a busy and inspiring teacher, and author of classical textbooks in medicine, physiology, and pathology which revolutionized the teachings of the time. He was withal a charming person whose life is a model of a good physician. While he did not make any brilliant discovery, he so influenced the mental climate of his time that the intellectual storm front with more energetic meteorological activities soon gave birth to experimental science.

Our patient, coming to Jean Fernel, is at once received by a magnetic and sympathetic person, a man of commanding presence and great charm. Immediately he inspires confidence and love. He does more than examine the patient's urine. He is careful and critical in his questions, thoughtful and gentle in his physical examination and wise in the general regimen of rest and mild but nutritious diet and a change of scene. Following instructions, our patient makes a slow but safe recovery.

IX. The vastly fermenting forces of medicine which brought the School of Paris to its great fruition in the early portion of the Nineteenth Century came about as the result of forces far too numerous to list. Practical medicine developed because there was enough unrest in the air to stimulate a number of very brilliant

men. They had before them large city hospitals with an enormous patient turnover. The riffraff of France, the dregs of a vast city, as well as the politically important veterans of the Napoleonic Wars, provided the opportunity for the first significant large scale correlation of clinical findings and the gross morbid lesions found at autopsy. The teeming hospitals of Paris with their great variety of physicians, the stimulating lectures and ward rounds, the passionate love of learning, the yeasty times of liberty, equality, and fraternity bubbling up with their unreconciled and unreconcilable contradictions, the dreams, the realization and then the loss of a mighty empire built and ruined by the genius of Napoleon, all exploded in a series of remarkable developments in medicine. We may think of these as being exemplified by Laennec, who for reasons of modesty and delicacy invented the stethoscope. First it was a beguiling toy. Then as an instrument of precision it focussed the attention of physicians on processes and physical signs which they had neglected hitherto, although they had always been readily accessible by direct application of the ear to the chest. Whatever the precise causes may have been, Louis and Laennec led a distinguished field of physicians. They made two notable advances. One was the correlation of symptom with lesion, or sign with process. This was possible only because of the extensive experience on the wards of the large hospitals where careful records were kept, eventuating after the death of the patient in a meticulous dissection. An autopsy was inevitable for anyone dying in the big hospitals. Thus the uprooted of France, lost in the city of Paris, made their contribution to medicine. At autopsy, great clinicians got their comeuppance. But as time went on they were able to make corrections. Before many years, the skill of the Paris clinicians gained world-wide renown. American medicine received a major impulse from the Paris school through the Jacksons, Holmes, Gerhard and others. This was more important than the previous British influence, though perhaps not so important as the later German influence.

The hardened clinicians of the Paris school, encountering death so frequently, developed little respect for therapy. They became therapeutic nihilists. Most therapy then was based on systems of very little value anyhow. Therapeutic nihilism was in fact clinical

realism. Sympathetic attention to the patient provided about the only effective therapy there was.

The other great contribution of the Paris school was the introduction of statistical methods in the evaluation of therapy. Heretofore, a strong person, someone in a position of authority, might bend or warp the customary therapy of the day by his strong pronouncements. Things were declared. By virtue of the authority of the speaker they were accepted into the welter of confusion which passed for treatment. The statistical evaluation of therapy by studying alternate cases in a series revealed with shocking clarity and emphasis, grave misconceptions of therapy which had survived from antiquity. So, gradually, hard-won clinical facts emerged from the chaos of the period through the work of the splendid collection of French physicians of the Paris school between 1800 and 1850.

Our patient seeks admission to the Hotel Dieu, God's Hostel, named as were many of the ancient hospitals in the prevailing religious background of medical care. He is admitted to the Great Room of the Poor, *la Grand Chambre des Pouvres,* the oldest edifice in continuous use as a hospital. A clinical clerk takes the history and makes the examination and the following morning Laennec, the chief of service, makes rounds with his coterie of students and attendants. The patient is questioned in detail, each comment being recorded faithfully by the clinical clerk, who is also a scribe. Then the details of the physical findings not only of the abdomen which seems to be the seat of trouble but the entire chest, heart, and the remainder of the body are duly recorded. Therapy is expectant. Even the patient's increasing fever pain and delirium do not call forth any change in therapy. Ultimately our patient dies. At autopsy the findings of an abscess near the cecum are faithfully recorded. The time is not yet ripe for the significance to be understood.

My theme of the patient down through history has some lessons. Care, love, humanity, have always been the leaven which raises hope — the yeast in the bread of life. Science, the ability to see things as they really are, is essential to medicine but must not displace the grace of love which is quintessential. Society seems to be so ordered that a certain quantum of disease or trouble always exists. Knock one down and another one bobs up. By

some unholy perversity, each society produces its own diseases. At least that is my own reading of the present and my reading of history. Some of medicine's bleak failures of the past have come from losing sight of the patient in concentrating on the science of the day as well as failing to use accrued knowledge and wisdom, through laziness or ignorance. It can happen even when the patient may seem to get much attention. In the flux of events, the corpus of medicine cannot be static. We advance or fall back. The ignorant are doomed to relive the errors of the past. Time and again in the history of medicine we have the sensation that this is where we came in.

PRESIDENT WILLIAMS — Thank you, Dr. Bean, for that very fine presentation.

In the middle thirties, during one of the first meetings of this Association that I attended, I was impressed by a study presented by Dr. Lindford Lee of the Pacific Mutual Life Insurance Company in Los Angeles. It indicated to me that the Medical Department of that fine Company really studies its procedures and has reasons for doing things. So, it was only natural that I would look to them this year to see what they were studying. I was very pleased to find that they were making a real objective study of some of their underwriting procedures. We have a very fine successor to Dr. Lee, Dr. John C. Talbot — spelled with one "t." He will be our leadoff speaker and will give us information and some data that he has on "The Cost of Substandard Life Insurance." John, will you come up?

SOME DATA ON THE COST OF SUBSTANDARD LIFE INSURANCE

JOHN C. TALBOT, M. D.
Medical Director

Pacific Mutual Life Insurance Company
Los Angeles

I spent nearly five years in the Army and should have learned not to volunteer. I really only expected to be one of five or six people in a symposium on this subject. When I found out that this was not the case, I just didn't have the heart to deprive Dr. Williams of the satisfaction of having two speakers with the same name on the program.

The problem of cost is a very illusive one. This is particularly true in a business like ours where, instead of taking raw materials and making a commodity out of them for sale, we simply print up a piece of paper. When we read a report somewhere that the cost of the common cold in the Unted States amounts to three billion dollars every year, most of us, I am sure, are a little dubious about the real meaning of these figures. My own report today is of no such sweeping significance, but I will try to keep it a little closer to reality. If any of you should find it less than fascinating, I can only promise that it will be fairly brief.

There is no question at all about the great importance of substandard insurance today. Several million people who could not otherwise be insured have substandard policies. From the agent's standpoint, it is overwhelmingly better to have something to offer an impaired risk, even at an extra premium. Anything I say about cost, therefore, will in no sense be intended as an argument for giving it up.

The main purpose in presenting these figures is that the costs do have to be kept in mind, especially when we are trying to assess the value of extra studies and tests ordered in the expectation of making a precise judgment of the mortality classification for a particular case.

TABLE I — MORTALITY RESULTS — 15,276 policies 1935–1955

Rating	Actual Mortality
125	145
137½	163
150	155
175	189
200	218
250	269
Over 250	325

One very important item in the cost of substandard insurance, of course, is the mortality cost. Table I shows the results of a 20-year study, up to 1955, with enough substandard policies and deaths to be reasonably accurate. The percentage ratings are shown in the left column, and the actual mortality experience on the right. I don't know how often most companies make this kind of study, but this was quite interesting to us.

In general, the classifications were surprisingly close to the expected ones; in fact, the only ones significantly different were the first two, the two lowest classifications. In retrospect, and putting the most respectable possible interpretation on the figures(!) I think we might say that our substandard premiums were too high in comparison with most companies at that time and, in underwriting, we probably made an unconscious correction, at least at the lower rating. Another item, I think, was probably the fact that many of the cases in the two lowest classes were overweights with borderline blood pressure, and we did not realize how bad they were until the build and blood pressure study came out.

Incidentally, these figures illustrate two statistical concepts rather well; first the tendency of averages to even out over large numbers of cases. This does not mean, of course, that every case is classified correctly but, on the average, they come out fairly well. I think John Hutchinson would agree, since we have both done it, that this is rather like grinding a telescope mirror by hand. You take a piece of glass and move it back and forth over some abrasive, constantly rotating it and,

at the same time, you move around the grinding stand. As a result of the addition of all these random motions over a period of many hours, you actually come out with a result that is accurate to within a few hundred-thousandths of an inch.

However, the first two categories, the two lowest classes, show what happens when you have what the statisticians refer to as "bias," some influence which tends to distort the picture, and you no longer have a random set of observations. The whole average is pushed out of line.

The small study on which I principally want to report covered a little over 1,000 substandard cases, issued in 1958 and 1959, and followed just to the first policy anniversary.

Table II shows the general nature of the principal impairments for which the substandard ratings were assessed. You will note

TABLE II — NATURE OF IMPAIRMENT

BLOOD PRESSURE	30%
BUILD	24%
HEART MURMURS	7%
DIABETES	5%
CORONARY DISEASE	4%
OTHER FACTORS	30%

that build and blood pressure were factors in more than half the cases. This Table is consistent with a report by Mr. John Ryan of the New York Life Insurance Company in the 1951 Home Office Life Underwriters Association reports, provided we correct for the tendency of the lay underwriter to classify diabetes as a disease of the genitourinary system.

Table III shows the distribution of cases by the degree of rating. You will note the rather high proportion of cases with fairly high ratings. I think this is a reflection of the nature of

TABLE III — DISTRIBUTION OF CASES BY RATING

To 150%	582	54%
175-250	368	34%
300 and over	130	12%

the business which was presented to us for consideration, rather than an especially conservative underwriting on our part.

We tabulated the investigative cost for 1,080 policies actually issued. This includes only the medical examination, which was $7.50 at the time this study was made, the inspection report, the attending physician's statement, and any other special studies, such as x-rays and electrocardiograms. We did not attempt to evaluate any administrative or other costs, so that our cost figures are, therefore, actual out-of-pocket expenses of developing underwriting information for the specific case.

Table IV shows the results. These figures are to be compared with an average investigative cost for all our cases of $9.50 per

TABLE IV — UNDERWRITING COST

Rating	Cost Per Policy	Cost Per $10,000
To 150%	15.10	12.20
175-250	18.50	12.70
300 and over	19.70	17.00

policy. The cost per policy is higher than the cost per amount, illustrating the surprising fact that the average substandard policy was larger than normal in face amount: $12,400 as compared with $9,900. As might be expected, the cost went up at the higher ratings. The average cost for all substandard policies was $16.80, just about twice as high as it was for standard cases.

TABLE V — NOT TAKEN & FIRST YEAR LAPSES

Rating	Cases	Not Taken	%
To 150	582	239	40%
175-250	368	202	55%
300 and over	130	78	60%
Total	1080	519	48%

Table V shows the combined not-taken and first-year lapse rates for these cases. The over-all rate is 48 per cent, and it goes up even more at the higher ratings. This is surely the most important single factor in the increased cost of substandard busi-

ness. The comparable rate for our standard issues is only 15 per cent, so this is over three times as high.

In order to arrive at a single figure to express the cost of substandard business as compared with standard, I have developed a sort of actuarial-type formula. The actuaries, who have a sort of medieval guild, fill page after page of their publications with this sort of thing. In many cases, their formulas really do represent quite abstruse mathematical manipulations. In some instances, however, the complexity is more apparent than real, and the formulas are not very complicated once you know what the symbols mean.

This is a fanciful example: to find the ratio, R, of the cost of substandard insurance as compared with standard, we add up the cost of all the substandard cases and divide by the number of substandard cases. This gives us the average cost for a substandard policy. Then, we divide this result by the sum of the cost for the standard cases, divided by the number of standard cases and, because we are dividing by a fraction, we invert the figure and multiply. Then, we multiply this by the sum of the lapse and non-taken rate for the substandard divided by the similar rate for the standard policies. Really, this is nothing more than taking the average cost of the substandard case, $16.80, dividing by the average cost of the standard case, $9.50, and multiplying by 48 over 15, which is the ratio of the lapse and non-taken cases in the two classes of business. For our cases, this ratio comes out to 5.7, meaning only that investigative costs for the substandard cases are over five times as high as they are for standard cases.

$$R = \frac{\Sigma Css}{Nss} \times \frac{Ns}{\Sigma Cs} \times \frac{Lss + (NT)ss}{Ls + (NT)s}$$

$$\text{or, } R = \frac{\$16.80}{9.50} \times \frac{48}{15} = 5.7$$

I certainly do not intend to attach any very great importance to the validity of this figure. It is a very rough indication.

I want to close with a quotation which, to me, rather epitomizes the problem of substandard insurance, at least from the standpoint of the medical director. It comes from a pamphlet put out by the Insurance Research and Review Service in November

1958, with the title, *Placing the Rated Policy.* I am going to quote this passage without comment.

"If the next company we try gives us a better offer, then we go back to the first company and suggest that they reconsider their decision."

PRESIDENT WILLIAMS — I think you will agree with me that we have "latched onto" somebody who studies his procedures.

The same subject will be carried on by an independent discussion, by Dr. David Breithaupt of the Manufacturers of Toronto, Canada.

DR. DAVID J. BREITHAUPT — It is difficult to follow Dr. Talbot after such a presentation. He ended up with the suggestion that the agent might try another company. I am sure you are all aware of that kind of presentation, and every once in a while we wonder if the agent really tried the other company or just dreamed it up.

As you are all aware, having dealt with actuaries for a while, they soon acquire a facility of juggling figures to suit their purpose and that, perhaps, is the art of the actuary. The formula that Dr. Talbot has presented to you is liable to the same sort of juggling, if you wish. If you do not use the 48 per cent that were not-taken of the substandard against the 15 per cent not-taken of the standard, but instead look at it the other way around and say 52 per cent were placed and 85 per cent were placed, then, of course, you would have to reverse the ratio. Then the 85 would be on top and the 52 at the bottom and, instead of getting a figure of 5.7, you would get a figure of about 3.

In the newspaper this morning, there is a great to-do about the first post card that came through automatically. Well, it would not be fair for the Post Office to say that they would charge all the costs of this automation to the dead letters, or the letters that had some extra postage to be collected at the other end. Similarly, I think, it may be a little wrong to attribute all the additional costs of separating the sheep from the bigger sheep entirely to the bigger sheep. Maybe, the standard people have to carry some of that cost.

In the summer of 1959, the opportunity presented to look at some of our substandard business. We thought it would be worth doing a study of medically substandard business issued in 1949

and found it was feasible to trace it to the 1957 anniversary. We pulled out 1,000 consecutive cases, all with a medical extra premium, which represented about six months' business in 1949. Aviation and occupational extras were excluded. The results are shown in the figures. Forty per cent of this business (figure 1) was issued to Canadians, 26 per cent in the United States, and 34 per cent in our foreign fields.

BY AGENCY

1,000 cases substandard medical business
issued in 1949, traced to 1957.

Canada	40%
U.S.A.	26%
Foreign	34%

Fig. 1

This (figure 2) shows the impairments in the usual distribution — build, blood pressure, ulcers account for 38 per cent; heart

BY IMPAIRMENT

Build	15%
Blood Pressure	13%
Ulcer	10%
Heart Murmur	4%
Habits	4%
Tuberculosis Contact	4%
Tuberculosis	3%
Diabetes	3%
Asthma	2%
Pregnancy	2%
Pleurisy	1%
Tachycardia	1%
Albumin	1%
E.K.G.	1%
Others	36%
	100%

Fig. 2

murmurs, habits, tuberculosis, diabetes, asthma, pregnancy (which we were rating at that time) account for 22 per cent; and the less common ones, pleurisy, tachycardia, albumin, electrocardiograms account for 4 per cent; and 36 per cent miscellaneous causes.

% RATING	
to 150%	32%
151 to 200%	46%
201 to 300%	16%
higher	6%
	100%

Fig. 3

Figure 3 gives the rating by mortality percentage. Thirty-two per cent were at 150 per cent; 46 per cent were 150-200 per cent; 16 per cent were between 200-300 per cent and only 6 per cent were more than 300 per cent.

BY EXTRA PREMIUM	
3/M	31%
3.01 to 7/M	31%
7.01 to 15/M	28%
Others	10%
	100%

Fig. 4

This (figure 4) shows the amount of extra premium. Thirty-one percent of them had an extra of $3.00 per thousand, which is our minimum extra. Thirty-one per cent had an extra of between $3.00 and $7.00 per thousand; 28 per cent were between $7.00 and $15.00 per thousand, and others, including higher ones and temporary extras accounted for 10 per cent.

This table (figure 5) is the one that shows the results we were looking for. We were really interested in knowing how often we reconsidered a file. This exhibits the per cent of substandard policies in force, yearly, that are reconsidered. That is, of 100

medically substandard policies in force in a year, we removed the extra in 2.8 cases. We reduced it in 1.1, a total of 3.9 per

RECONSIDERATIONS

% of substandard policies in force yearly

Extra removed	2.8	
		3.9%
Extra Reduced	1.1	
No change	1.5	
Not proceeded	0.8	
Total	6.2	

Fig. 5

cent. We made no change in 1.5 per cent and in .8 per cent the Branch did not proceed with our requirements for reconsideration. To repeat, of 100 medically substandard policies in force a total of 6.2 per cent per year were reconsidered and about two-thirds of these had the extra reduced or removed. We have increased our efforts to discourage reconsiderations.

Figure 6 shows the results of the business. Of the 1,000 lives issued insurance, 135 of them were not placed. Of the remainder, there were 28 claims, 3 per cent; 12 per cent surrendered; 20

1949-1957

Of 1,000 cases issued with a medical extra, 135 were not placed.

Of the remaining 865 placed business.

Claims	3%
Surrendered	12%
Lapsed	20%
In force	65%
	100%

Of these 865, 36% are still in force with an extra premium, not reconsidered.

Fig. 6

per cent lapsed (this is about similar to the standard rate); 65 per cent were still in force in 1957. Of the 865 put in force, 36 per cent were still in force with the extra premium eight years later and had never been reconsidered.

The final illustration (figure 7) shows an attempt to compare our 1949 underwriting with what we might have done in 1959. It was rather hurried underwriting, as I was skimming through

1959 UNDERWRITING

Similar		50%
Less extra	35	
Std.	9	44%
Higher extra		5%
Decline		1%
		100%

Fig. 7

the files, but it appeared that the company might have taken similar action in half of them. We might have rated some 44 per cent of them a bit less. I would have been inclined to charge a higher extra on 5 per cent of them and on three cases, which show here as 1 per cent, I would have declined. These, incidentally, were not the ones who died.

Well, one subject that was not touched on here is the cost of the ones that were not issued. As you know, a lot of inquiries come in to you, a lot of them get dropped, or stray by the wayside and never get around to being issued. That, too, is part of the cost of doing substandard. Dr. Talbot didn't tell us, perhaps, it was not part of the question, how profitable it was to do substandard business. If you're going to calculate the cost of substandard against those who are substandard, you need, perhaps, to realize what the alternative is. What else can you do? With increasing competition, there seems very little else one can do. You have to take this cost.

I think an agent's reaction to this would be, well, if the cost of substandard is so high, why not issue them standard?

PRESIDENT WILLIAMS — I am sure you all have your own

figures. You have compared them in your mind with these two fine reports. If any of you would like to get up and give your own experience to compare with theirs, now is your chance. If not, would you like to ask them some questions?

DR. FRANCIS E. DEMARAIS [Penn Mutual] — I would like to ask Dr. Breithaupt, in those cases which he considered 10 years later that he would have rated more leniently, does he have any opinion as to the type of impairment involved? The second part of this would be if, in 1959, he felt that this was the correct mortality, was the experience in 1949 actually too heavily rated by your actuarial investigation?

DR. BREITHAUPT — The question, I take it, was which impairments would be dealt with more leniently. Well, some of them are easy. We used to charge $7.50 per thousand for one year on applicants who were pregnant at the time of application. One day, we were asked by one of our better brokerage managers from the lay position, "Is this really necessary?" That, of course, pulled down the house. After that, we stopped charging the $7.50 by one.

The others were tuberculosis and tuberculosis contact, more frequently; blood pressure came in fairly often. We took rather a more severe view of blood pressure at that time than we do now. We were rating ulcers, perhaps, more seriously then than subsequently. We were then rating tuberculosis contact $3.00 extra for 10 years. We would be much more lenient than that now. I also have build listed as one of these. I don't think the recent studies suggest that build is any better than it was. Perhaps, we were being a little more harsh then than presently.

I take it that the second half of the question was, how did we make out on these? That is the real meat of the problem. In this tiny study, our extra premiums collected paid for our claims.

Perhaps, there are extra deaths in the future. This is a very tiny series and not a valid figure at all but, certainly, we felt that there was sufficient extra accumulated here for the additional risk involved as well as the expenses involved.

PRESIDENT WILLIAMS — John, would you like to close with any remarks?

DR. TALBOT — I just want to say that, of course, Dr. Brei-

thaupt's points are very well taken. This does represent only a single facet of the problem. My real purpose in presenting it was to give you some idea, at least for this particular study, as to what the investigative costs amount to, so that they can be given consideration in trying to decide the importance of costs in particular cases.

PRESIDENT WILLIAMS — The second part of the oral examination for the Board of Life Insurance Medicine was completed yesterday, and there were several successful candidates. I am going to read their names, and I will ask that they stand as I read their names. If you will hold your applause, we will give them recognition when they all stand. They are:

Dr. Kendall Vaughan, Occidental
Dr. Andre MacKay, Alliance Mutual
Dr. Arthur Brown, New England Mutual
Dr. James Peters, New England Mutual
Dr. William Bradley, Phoenix Mutual
Dr. Raymond Candage, State Mutual
Dr. Albert Grunow, Prudential
Dr. Maurice Taylor, Beneficial Life
Dr. Bruce Grotts, Prudential
Dr. Allan Ainley, Travelers

Notice of their successful certification will be sent to each of these candidates, and a letter will be written to the President of each Company.

Most of us think of our next speaker as the distinguished Professor of Medicine at the University of Buffalo. We have heard his learned addresses on gout, arthritis and the collagen diseases. We have noted that he was, for many years, Editor-in-Chief of the quarterly journal, *Medicine*. To have a monograph accepted by *Medicine* is an honor, to be its Editor is a pinnacle of journalistic excellence.

Since October 1959, he has been Director of Scientific Publications and Editor of the *Journal of the American Medical Association*. His vitality and dynamic influence certainly show in this Journal. He has a wide field of subject material, and now he has

a vast audience. Recently, a number of the Journal had editorials on the endocrine regulation of blood pressure, the responsibilities of a hospital trustee, the frequency of appendicitis, and then, at the end of the series, there was a real gem on Philippus Theophrastus Aureolus Bombastus Von Hohenheim. We are looking forward to hearing from Dr. John H. Talbott. The subject is, "Medical Journalism and the American Medical Association."

MEDICAL JOURNALISM AND THE AMERICAN MEDICAL ASSOCIATION

JOHN H. TALBOTT, M. D.
Editor

Journal of the American Medical Association
Chicago

I assure you it is a pleasure to be with you and to share experiences at your Annual Session. Lest I be accused of masquerading, it should be clearly understood that I come to you as a former teacher in a medical school, who has been assigned, only recently, to the position of Director of the Division of Scientific Publications of the American Medical Association.

Approximately three years ago, when Dr. F. J. L. Blasingame was induced to abandon a rewarding clinical practice in Texas and direct the staff activities of the American Medical Association in Chicago, few physicians in America realized the impact that this appointment would have on American medicine. In former years, there was a tendency for the general manager of the A.M.A. to assume a position of secondary importance in the activities of organized medicine, while the Editorial Staff of *The Journal* appeared to set the policy. If the Editorial Staff was not responsible for the policy of organized medicine, it was assumed by many persons, within as well as outside the Association, that such was the case. Dr. Blasingame had served the A.M.A. as a member of the Board of Trustees for more than seven years and, although he was not familiar with many of the details of the staff operations, he did not come to Chicago entirely uninformed of the job that needed so desperately to be done. There were two obvious changes that awaited him and a number of details that did not appear on the surface.

The presses that had printed *The Journal,* the *Archives,* the *Cumulative Index,* the *Directory,* and *Today's Health* were abandoned at 535 North Dearborn Street. Printing is now performed outside of Chicago. *The Journal* is printed on McCall Presses in Dayton, Ohio — presses which print *Reader's Digest, News*

Week, Field and Stream, The Harvard Business Review, and more than 20 other weekly or monthly periodicals. The 10 specialty journals are printed on the Baird-Ward presses in Nashville, Tennessee. *Today's Health* and the *AMA News,* publications that are not my responsibility, are printed in Wisconsin. The dispossession of the presses permitted rebuilding of a portion of the office structure in Chicago and the refurbishing of the entire building. The present facilities comprise a large office building with eight floors above ground, plus a ninth floor auditorium and two floors below ground for storage and services.

The director of staff activities, assumed by Dr. Blasingame, is titled Executive Vice President. His assistant is Dr. E. B. Howard, who has been associated with the A.M.A. for more than 15 years. Concomitant with renovation of the building was a drastic reorganization of the staff. There are eight divisions, each with a director in charge. The Law, Communications, Field Service and Business Divisions are directed by non-medical persons. Dr. John Youmans, formerly Dean of Vanderbilt University Medical School, has just come to Chicago as Director of the Division of Scientific Activities. The important Council on Medical Education is his responsibility. Dr. Franklin Yoder came to Chicago shortly before I did as Director of the Division of Environmental Health. Dr. Lester is the Director of the Washington office. This leaves then the Division of Scientific Publications. The responsibilities of this Division include editorial composition of *The Journal* of the American Medical Association and policy decisions for the 10 specialty journals, of which the *Archives of Internal Medicine* is probably the most familiar to you. We are also responsible for the Library, the Archives and for the department that prepares the reference book *Standard Nomenclature of Diseases and Operations.* Other activities are planned and additional programs will be added from time to time. Each of the Directors has specific functions in the various divisions, as well as staff functions that are concerned with deliberations which affect physicians throughout the land.

I need not elaborate upon what I am sure is obvious to most of you. I have not pursued medical journalism as a professional career. However, I have been interested in medical writing for

a period of time longer than my pride is willing to admit. I say this, despite the fact that the two courses in English required for a liberal arts degree in college caused consternation to me and to my professor. The grades I received in these courses were the lowest grades of my four years in college. On the other hand, the course in Physiology in medical school provided the opportunity for my initial medical composition. I reviewed the literature on the relation of the autonomic nervous system to spastic paralysis. I labored long and hard over my thesis, which was not more than four or five typed pages long. Walter Cannon must have been very tolerant, however, as I was one of a few selected to read my thesis to the class near the end of the course. This event took place just 35 years ago.

Upon my return to Boston, following an internship in New York, I was fortunate in being permitted to spend the major portion of my time in the Research Laboratories at the Massachusetts General Hospital where problems of metabolic diseases and, particularly, gout appeared intriguing. Walter Bauer and Fuller Albright occupied the laboratory nearby. My first paper on gout was reviewed by members of the higher echelon. Walter Bauer, an authority on gout, mercilessly criticized my description of the scientific data that I had accumulated. Howard Means had little knowledge of uric acid metabolism, but his experience in composition was great, and he too spared no sympathies. I am confident that this manuscript went through a minimum of five or six major drafts. Disheartening though it was, the discouragement was not in vain. The knowledge that medical writing is a slow, tedious, even laborious chore was of itself heartening when, in retrospect, it was appreciated that sentences did not say upon re-reading what they were intended to say when composed.

Paul D. White, who occupied an office down the corridor at the M.G.H., was publishing a number of papers each year. He was an extremely busy consultant. In addition, he visited on the wards and did his full share of teaching. It was obvious that this busy schedule occupied most of his waking hours. I had assumed that his facility for composition was so perfected that the first draft of a manuscript was essentially the final draft. I did not have an opportunity to challenge P. D. on this point until a few

months ago. During the preparation of an editorial on medical writing, it seemed pertinent to emphasize the long hours required in composition, if an A-1 product is the goal. The statement was made in the editorial that few physicians in America, of which P. D. was one, were so proficient in medical composition that laborious preparation of successive drafts was unnecessary. The galley of the editorial was sent to P. D. When a reference is made to an individual in an editorial for *JAMA,* it is my custom to permit that individual the opportunity of reviewing the editorial prior to publication. I think he was unduly modest in his reply, but he denied the facility attributed to him. Presumably, it is not unusual for P. D. to prepare several drafts before a manuscript is ready for the publisher. One recalls the statement made by William Osler in this regard. "It is not unusual for me to go through four, or five, or six drafts in preparation."

Several of us here have been members of editorial boards of scientific publications. A few may have served as Chief Editor. The efforts expended and the hours devoted to editorial board activities during the last 15 years gave me little understanding or comprehension of the responsibilities associated with the editorship of the *JAMA.* Associations in the past entailed a few hours in the evenings, or the weekends, devoted to a review of manuscripts and manuscript editing of those selected for publication. The supervision and direction of *JAMA* is as different from this brand of editing as an avocation as is the bicycle from the space ship.

The Journal of the American Medical Association is the largest professional publication in America. There are approximately 150 pages of editorial copy printed each week, which comprises at least 60 per cent of the total pages in the issue. The selection of the manuscripts for these 150 pages is, in essence, the job of the Editorial Staff.

I am sure it is no surprise to you to learn that the majority of manuscripts submitted for review are rejected. The number sent to the editorial office for consideration, per year, is rather a staggering figure. With so many submitted and space to publish so limited, selection is critical. There is no Board of Consulting Editors in the usual sense of the term. We have a list, however,

of more than 1,200 physicians who evaluate manuscripts, but they are not troubled to review the very good manuscript or the very poor one. The remainder, and this comprises the majority, are sent out to one or more consultants for opinion. No manuscript, in the potentially acceptable category, is rejected without at least one outside opinion. This is not done to protect the Editorial Staff. Most important are the constructive comments which are passed on to the author for his enlightenment. It seems best to follow this policy also in order to assure the contributor that his manuscript is accorded a fair hearing before rejection. This policy is not entirely satisfactory, however, and some contributors refuse to take "NO" for an answer. They return the manuscript either in supplication or with a little bitterness in the follow-up letter. The manuscript is then sent to another consultant. A reversal of opinion sometimes occurs, but probably no more often than the reversal of an opinion of a case appealed to a higher court of law. It is admitted that, sometimes, opinions should be altered. In a few instances, they should be reversed. We are perfectly willing to admit this possibility.

The familiar cover of *The Journal,* with the advertising box for Saunders books at the bottom, appeared for several decades. Austin Smith, who followed Morris Fishbein as Editor, reduced the size of the advertising box by 50 per cent. The box was removed this Spring. Although the advertisement was not objectionable, it was my belief that the cover of a scientific publication would be more dignified if only the Table of Contents appeared. In revising the cover, several unnecessary items were eliminated. This included the unofficial Caduceus — there is no official Caduceus of the A.M.A. I also wanted to add a small amount of color. I had hoped that this could be done without making the cover gaudy. At all times the basic concept was paramount. The cover should not be altered to the extent that it would lose its identity. In other words, change it as much as possible without eliminating the traditional appearance. Since no expert cover designers were on our Editorial Staff, we sought counsel outside of the office. More than a dozen revised covers were considered over a period of at least three months. The final

decision was submitted to the Board of Trustees and their approval was unanimous.

You may be interested in the reactions to the cover expressed by the profession, when it made its official appearance on the first issue in July. It has been appearing little more than three months. Without counting each letter, I suspect that we have received at least 200 unsolicited comments. One comment was sent directly to the Office of the Executive Vice President. This was uncomplimentary. Two of the letters to me expressed unfavorable reactions. The remainder were enthusiastic. It is possible that a number of physicians in this country disapproved of the change, but did not voice their opinion. If fan mail can be used as a guide, one may conclude that the new cover is acceptable to the American physician.

Concomitantly with the critical inspection of the cover was the review of the mission of each of the sections in *The Journal.* There was also the recruitment of personnel. In the first category, it seemed prudent to examine *The Journal* almost page for page and to decide whether the composition of the past should be continued, modified, or abandoned. There was also the likelihood of adding, or substituting, new sections for old.

The constitution of the Editorial Staff has been extremely stable over the years. Only two changes have occurred in almost a decade. Dr. Austin Smith resigned as Editor more than two years ago and was succeeded by Dr. J. F. Hammond, who has been associated with *The Journal* for more than 30 years. The Abstract Section has been expertly handled by Dr. George Halperin since the 1920's. Dr. Jung and Dr. Brandstadt completed the roster of key personnel prior to one year ago. It was surprising to me that so small an Editorial Staff was able to edit approximately 150 pages of copy for each week's issue.

In addition to the limited number of key personnel, another characteristic of the staff was effective segregation and marked delineation of responsibilities. There was little interchange of activities and thoughts between sections. I considered this a selfish policy and less stimulating, individually, to the Editorial Staff. I believe that each member of the Editorial Staff should be knowledgeable in the several departments of *The Journal* and

should participate actively in the over-all mission and not be content to remain in one department, physically and spiritually, year after year. Prior to accepting the job in Chicago, I was reassured by the Committee on Scientific Activities of the Board of Trustees that it was my prerogative to enlarge the staff as well as the scope of interest of each member.

The first addition to the staff was a Managing Editor, Mr. Robert Mayo, who came to us with two decades of experience in the publishing of professional publications. In an editorial which described this position, he was identified as "The Boss of the Shop." It is his duty to handle the innumerable mechanical details, which include lay-out and composition of each issue of *The Journal,* as well as the supervision of the technical personnel in the Division.

A word about lay-out and format seems appropriate. In former years, the galleys of manuscripts ready for publication were selected, one by one, followed by the galleys of the various sections. The pile of galleys was then sent to the printer, without critical scrutiny as to their appearance in an individual issue. Concern was only for scientific contents and page composition. If a communication spilled over a few lines onto the top of another page, this was carried over into the printing. No attempt was made to begin a communication at the top of one page and to end it at the bottom of another. Considerable progress has been made in recent issues in reaching this ideal. Usually it is not mutilating to delete a few lines, reduce the size of a figure, or rearrange the presentation to insure full page coverage in the printed copy. This is an example of a mechanical problem which can be accomplished by a trained technical person in consultation with the Editorial Staff.

For many years, the style of composition of *The Journal* was fixed. Some have accused it of being stilted. As Editor, I am not particularly concerned about uniformity of style. On the contrary, I respect an individual's style so long as it is concise and embodies proper composition. If one author prefers biologic and another biological, each is entitled to his preference. It may disturb some, but it does not disturb me, to discover that two such terms appear in different articles in the same issue. Style

in medical writing in America has been neglected. I am hopeful that there will be a revival of interest and that instead of pointing to the London *Lancet, The New England Journal of Medicine* or The Book Reviews by Bean in the *Archives of Internal Medicine,* I hope that *The Journal* of the American Medical Association may be included in this exclusive category. I do not believe that style implies flowery diction or embroidered verbiage. The best style, usually, is the most concise. A clear short sentence may be more attractive to the ear and to the cerebral cortex than a rambling sentence with elongated words and extended qualifying phrases.

I believe that *The Journal* should be primarily a scientific publication. Its mission is to inform and to enlighten and, as an incidental sideline, sometimes to amuse. It seemed to me that the contents of "Medicine at Work" and "The Leisure Corner" would be more appropriate for the *AMA News.* These sections, therefore, were abandoned and although they have not been taken over entirely by the *AMA News,* a number of such items now appear in the bi-weekly publication. Not a single letter was written to the Editor objecting to the omission of these two sections. We fared less well with the substitution of "Satire" and "Medical Narration" for "Tonics and Sedatives." The so-called jokes had been so integral a part of *The Journal* for so many years, that the older generation, particularly, was unhappy over this deletion. Surprisingly enough, I received letters from several non-medical personnel who obtained suggestions from "Tonics and Sedatives" for composition of jokes which would then be sold for profit. As I reviewed this phenomenon, I concluded that many jokes printed in *The Journal* were modified from others that had appeared elsewhere. If ours then were modified, it is possible that after several modifications and revisions, a joke might end up as a duplicate of the original.

It has been customary to pay for jokes published. Thus, the elimination of "Tonics and Sedatives" has resulted in some modest savings for your medical association. We now spend a few dollars per year only on this section. This is the only expenditure for editorial copy in *The Journal.* Formerly, a number of editorials were solicited and the writer reimbursed. During the past year, we have not expended any money for editorials. They have

either been prepared by members of the Editorial Staff or sent to us as signed editorials and published without remuneration.

What is the purpose of an editorial in this scientific medical publication? It is not dissimilar from the principal mission of *The Journal*, namely, to inform and to enlighten. I believe that editorials in newspapers and in non-scientific publications have a somewhat different purpose. I hope that physicians will give thought to non-medical problems as well as medical matters; but this is not the primary purpose of the communications that appear on the editorial pages.

If you have scanned the issues of *The Journal* in recent months, you will have discovered several types of editorials. A review of something new in medicine is obvious and needs no justification. It would not be difficult to publish several pages of editorials of this type in each issue and not exhaust the field. Enzymes, medical genetics, tissue immunity, and trace metals are examples of subjects that present many opportunities for discussion of interesting investigations. Also I am interested in medical history, although not from the standpoint of the antiquarian, but rather from the exploration of concepts that have appeared in medicine over the past 3,500 years. It is pleasant to summarize the contributions of Harvey, Vesalius, Maimonides, or Sherrington. More important, however, is the examination of the historical, medical, political and sociological background of these medical greats in relation to their scientific contributions. We have published few editorials on controversial issues.

Since I have been taken to task severely for an editorial on cigarette smoking and lung cancer, published shortly after I came to Chicago, I might discuss this specific one briefly. The editorial was published over my initials, which meant that I was responsible for the opinions expressed. If one took pains, however, to compare the contents of the special contribution by Dr. Leroy Burney which appeared in the same issue with the opinions expressed in the editorial, the agreement would be startling; I might even have been accused of plagiarism. Words are powerful, however, and the slanting of one sentence by the insertion of two words was responsible for the tempest in the pot of tea. I was accused of being a heavy cigarette smoker; the fact is that I have not

smoked a cigarette since my intern days. To me cigarette smoking is a messy habit. I much prefer a strong cigar after dinner. Letters from certain vested interests in this country accused me of infidelity to science. I had only intended to communicate my skepticism of the far-reaching conclusions drawn by the biometricians. I was accused also of being in the pay of the tobacco industry. There were a few threatening letters sent to the Board of Trustees demanding my dismissal.

After the mist had cleared somewhat, it seemed appropriate to discuss editorial policy with the Board of Trustees. It is gratifying to report "that it is appropriate for certain editorials that appear in *The Journal* to carry the signature of the Editor, particularly where the Editorial is concerned with some controversial matter on which neither the Board nor the House has taken action." In substance, my neck is in the noose. I will strive as best I can to prevent the rope from being drawn too tight or the floor from being sprung from under me. It should be understood that no one polices my editorials. Frequently, I seek counsel from members of the staff as well as from members of the Association throughout the country. But the Editor of the *JAMA* is bound only by good judgment and good manners in his expressions of sentiments on the editorial pages.

We have added a section on "Preliminary Communications." I believe that, respected as *The Journal* is, it has one purpose in addition to publishing clinical data that have been proved sound and that carry the stamp of authority. Furthermore, there is no infallible rule that enables one to determine what appears to be sound today will not be proved unsound tomorrow. It seems wise, therefore, to publish "Preliminary Communications" from time to time of data that have not been subjected to exhaustive trial in the laboratory or the clinic. In this regard, we are merely keeping up with medical news in the daily press. "Special Communications" are somewhat different from "Original Contributions." A "Special Communication" frequently is solicited, sometimes from non-medical personnel, such as the recent contribution from President Millis of Western Reserve University entitled "Responsibility in the Troubled World." A "Special Contribution" is one sent on to us for consideration. A recent example is the

manuscript by Stephenson entitled "The Trustee's Responsibility for the Quality of Medical Care." Another new section is "Fracture of the Month." This is prepared in the Fracture Clinic of the Massachusetts General Hospital. We propose to add sections in other specialties from time to time in the future.

The abstracting of medical literature is an area that merits critical exploration. Since *The Journal* has a larger circulation and a larger Abstract section than any other scientific periodical in America, every effort must be expended to insure maximum effectiveness of our Abstracts. You will recall that, for several years, literature was abstracted under subject heads. Previous to this style of presentation, Tables of Contents and Abstracts of selected articles had appeared. We have reverted to this format in recent months. In planning for the future, I should like to publish more Table of Contents and shorter Abstracts and provide better coverage of national and international literature. We should also like to publish the Abstracts so that they could be removed easily from *The Journal* and filed by those who keep an abstract file.

This leads me to the final item, the binding. The issues of *The Journal* have been stapled for many years. To dismember an issue is not easy. On the other hand, if a journal is bound in "perfect binding," the backing may be readily broken and desirable pages removed. With this binding, *The Journal* should lie relatively flat on the desk when it is open. If one or more original contributions are desirable for future reference, these may be torn out readily. Eventually, we hope to have black and white advertising on the back of each abstract page so that abstract pages also may be torn out and individual references filed without mutilating an equally desirable reference on the back of the page. Obviously, the next step is to provide a binder or binders for pages removed. I believe that few physicians bind *The Journal* at this time. This function is reserved principally for libraries. When the physician has finished reading an issue, it may be dismembered. If he has occasion to refer to back issues, the bound copies in a nearby medical library should serve the purpose.

I suspect that the recurrent personal references may be surprising to many of you. I hope that it has not been too disturbing.

The Journal is read by individuals. I see no harm in referring to selected aspects of its preparation by individuals.

PRESIDENT WILLIAMS — This subject is certainly one we are dealing with every day, every week, in the year. Do you have any questions or remarks you would like to make, or do you wish to ask Dr. Talbott to enlarge on any details that he has discussed?

DR. WILLIAM R. BRADLEY [Phoenix Mutual, Hartford] — I wonder, Mr. Chairman, if Dr. Talbott would discuss the most frequent faults in the scientific papers that come to him?

DR. TALBOTT — Sir, that is a large order. If one were to discuss only one subject, it may not be the *most* important, but it certainly is an important subject; that is, the failure to seek counsel before the beginning or before the starting of the collection of the scientific data. Frequently, the investigator, the physician, decides after he is well along in a project that this may be something he would like to publish. He then has lost valuable time in having the experiment or the program planned properly. This should be the first step after the selection of the subject. If he plans his program properly — and I am referring, of course, to his statistical help — so that when he gets the information, it will have meaning instead of ending up with his own personal convictions, which may or may not be statistically sound.

I think that the majority of the fairly acceptable manuscripts that we reject, other than those that obviously neither you nor anyone else would care to publish in a scientific periodical, are rejected because of the failure to have statistical help in the planning as well as statistical help in the final evaluation.

PRESIDENT WILLIAMS — Thank you very much, Dr. Talbott. We are honored to have you with us, and we want to thank you for your fine contribution. I am sure that his first remarks on selection, rejection and request for reconsideration were very familiar terms with us.

Our final talk is by a speaker who needs no introduction to this group. I would like to point out certain coincidences that appeared in the program. Besides having two John Talbots, it turns out, with no plan on my part, that three of our speakers interned together the same year at the same hospital, the Presbyterian Hospital in New York. The first was Dr. Perera, the

second was Dr. Parson, and the third is Dr. Johnson. They are old friends, but I didn't know it until they arrived here. I would also like to point out that our speaker, Dr. Johnson, started his career exactly the same as Dr. John Talbott from Chicago. He graduated from Ann Arbor, and then took his internship at the Presbyterian. They both had the same course of events.

I am going to let Joe introduce his subject. I'm not going to give him any preliminary sendoff. I'm not going to introduce him any further because, as I think you will agree, Joe is one of our very fluent speakers.

PSYCHIATRIC TERMINOLOGY

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Vice-President and Medical Director

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It is indeed a challenge to follow Dr. Talbott. I have, fortunately, a sort of indwelling editor in my own home. My wife, whom I acquired when I was interning at another hospital in this city, once read my first effort at scientific presentation and, like the wives of many doctors, had picked up a little of the vernacular. She put the manuscript down and said, "I've never seen so many compound commutative sentences in all my life."

I would like to talk to you about psychiatric terminology, particularly as it relates to our business.

The group of illnesses in these days referred to as mental has been a part of the human experience under a variety of names for as long as we have knowledge of man's concern for his fellow. More than any other illnesses they bear the tragedy and splendor of the human state and, in the broad spectrum of their manifestations, they are indeed peculiarly and significantly human. Whether a Stone-age skull is trephined to allow a devil to escape from a disturbed father, whether a swineherd goes bankrupt in Gaderene, his herd floating belly up in the Sea of Galilee, in order that a man, homeless, naked, living among the tombs and in the wilderness, frequently in chains, might be clothed and in his right mind, or whether a curtain is drawn lest a Renaissance heir be moon-touched, we find not only evidence of treatment and prevention of mental illness within the understood frame of reference but also the origins of Psychiatric Terminology. While devils are not presently found in the Official List of Impairments, the rubric which stands for moon-touched is to be found in its Manual for Coding Impairments, January 1960, under Lunacy (Insanity) — 207 — Psychosis. Such a sign is evidence also of a terminology which, changing over the centuries, has in quite recent years moved to the technical or special words used by the discipline of medi-

cine rather than those of religion and of law. Language, particularly technical language, is a vital, changing experience but must retain enough of its form and substance to allow for communication, not only within the system used by a particular body of knowledge but must maintain some, usually more limited, conceptual significance to other disciplines outside the system. Even the words Psychiatry, Psychiatric and Psychiatrist are relatively new, with a life span of general acceptance and usefulness of no more than 40 years. Yet, actuaries and physicians must have in common at least a sign language and in broad areas they have forged useful ones. It is the thesis of this brief paper that the present times require a more adequate one in the medical specialty of psychiatry.

Communication is based on signs and symbols. Symbols relate primarily to conceptualizing. Signs are directed to giving information. They make possible a reading of danger before the event. We may conclude, therefore, that in a semantic, as well as a legal sense, the M.I.B. deals with signs, with warnings and not with concepts. It raises flags but draws no conclusions as to insurability, rating or rejection. The accumulation of signs and their orderly arrangement is referred to as knowledge, if it exists inside a person and, as information, if it is accessible to others. We, therefore, must be concerned with who makes the signs, the nature of the signs, their accumulation and their availability in such form as to constitute information appropriate to the purpose of the M.I.B. and its proper concern for the legal strictures imposed by the society in which we serve.

This whole business of a medical nomenclature having more than a regional basis is relatively new and has required not only broad and continuing consultation but periodic revision. Both the official List of Impairments and the Standard Nomenclature date their effective beginnings from the mid-thirties with major revisions in each as recently as the early fifties. The Diseases of the Psychobiologic Unit of the Standard Nomenclature, however, had its beginning as early as 1917, in an effort to establish uniform statistics in hospitals for mental diseases.

As World War II began, the only psychiatric nomenclature available had been developed primarily for needs and case loads

of public mental hospitals. Yet, certainly 90 per cent of the cases handled by designated physicians did not fit into the categories available. In 1944, the Navy attempted to make a revision of its nomenclature and still stay within the limits of the Standard where possible. The next year, the Army attempted a revision by abandoning the Standard's basic outline in an effort to deal with the actual problems confronting it. The following year, the VA attempted a nomenclature along the lines of the Army's and a revision of the International Statistical Classification attempted to classify mental disorders along the lines undertaken by the Armed Forces. By this time, things were about as bad as they were in the 1920's and one agency found itself using one nomenclature for clinical use, a different one for disability and the International for statistical work. It was at this time that the Committee on Nomenclature and Statistics of the American Psychiatric Association undertook a classification and by 1950 was able to use, as a consultant, the Chief of the Biometrics Branch, National Institute of Mental Health. From these undertakings there emerged the Diseases of the Psychobiologic Unit which constitutes the psychiatric terminology of the Standard Nomenclature of Diseases and Operations, 1952.

These efforts stemmed not only from a manifest confusion but because of practical considerations which, I believe, are presently pertinent. When it is necessary to force classifications designed for one purpose into a structure designed for another, there results a distortion that may make unrecognizable the emerging classification with resultant loss in human and economic values. The Army, the Navy and the Veterans Administration required some form of reporting, a type of reporting that had definite relations to duty status, hospitalization, pensions and other discharge benefits. This is a practical requirement of accounting, as something to count is a basic actuarial need. There resulted, therefore, a situation in which "relatively minor" personality disturbances, which became of importance only in the military setting, had to be classified as "psychopathic personality." Psychosomatic disorders turned up in the nomenclature under the various organ systems by whatever name a gastroenterologist or cardiologist had devised for them. The "psychoneurotic label"

had to be applied to men reacting briefly with neurotic symptoms to considerable stress and individuals who, as subsequent studies have shown, were not ordinarily psychoneurotic in the usual meaning of the "term." It is interesting, in this connection, that the Impairment Study of 1951, showed the proportion of female lives to be high in each of the neurasthenia or nervous prostration classifications, "greater than would have been expected on the basis of the prevalence of disorders of this character in the general population." Under the classification psychasthenia or psychoneurosis, however, where a large proportion had been diagnosed as psychoneurotic in connection with selective service and service in the Armed Forces, the proportion of female entrants was low and "not characteristic of the condition."

Since 1952, the rubrics psychasthenia, neurasthenia and nervous prostration, previously part of the language of insurance medicine, have been dropped. These, with some 35 other psychiatric terms, move through 258 to emerge as psychoneurosis, just as all the psychoses, despite certain manifest differences in prognosis, are reported as 207-psychosis. There is a beginning utilization of parenthetical subclassification which may be of help, for, though compromise is always necessary in establishing a nomenclature which is not unwieldy, oversimplification can result in misleading signs. An example, from perhaps a more precise, or at least more mechanical impairment than those under present consideration, would be fecal impaction emerging via 532 as intestinal obstruction.

It must be stressed here that the specific design of reporting for the M.I.B. is not for statistical purposes or impairment studies but, primarily, to make available such signs as will help medical underwriters in their consideration of prospective insurance risks, develop information in addition to the usual medical and inspection reports which is relevant and necessary to careful underwriting procedures. The design or purpose is more closely that of the Standard Nomenclature than that of the International Statistical Classification.

I suppose it might seem presumptious for me to state that the 1952 List of Impairments constitutes an excellent example of a cooperative effort doing excellently what it set out to do. However, I certainly think this is true in the area of psychiatric

terminology which I set out to study in preparation for this paper, though in the same area I am less happy with the 1960 Manual. Just as the psychiatric terminologies, so carefully worked out and devotedly revised during the thirties, proved themselves inadequate to the demands of the early forties because things were required of them which they were not designed to include, I believe there is evidence to suggest that the 200 Code (Brain and Nervous) is beginning to fall short as an aid to obtaining information relevant and necessary to sound competitive, contemporary underwriting.

In a paper such as this it is quite impossible to review in detail the many changes that have taken place in the past 10 years which make for a different climate in the diagnosis, treatment and prognosis of the illnesses constituting the Diseases of the Psychobiologic Unit. Perhaps, most important is the manifest fact that the public is concerned with and, to an extraordinary degree, more accepting of these illnesses. The concept of psychosomatic illnesses has a very real acceptance, not only because of a great deal of both professional and lay writing on the subject, but because the concept is part of our language: "I took one look at her and my heart stood still," "Oh, my aching back," "He gives me a pain in the neck," or, the more recent, "executive ulcer." In addition, there has been a very real grass roots concern as represented by the local, state and national mental health associations, translated into increasing concern and appropriations by legislative bodies at all levels. While the over-all increase of psychiatrists turned out by our medical schools has not been impressive, there have been an increasing number of stipends available during the past 10 years for postgraduate training and postgraduate activities in this field have been carried on intensively by the American Academy of General Practice and other more limited specialty groups. While only 1 per cent of the $3.7 billion, estimated as the annual cost of mental illness to this nation, is devoted to research in this field, there are interesting developments in some of the metabolic approaches which offer more precise measurements in certain of the psychoses.

The development of psychiatric facilities in general hospitals, the increasing availability of community out-patient psychiatric

clinics, the impact of chemotherapy during the last seven years, the increasing recognition by insurors and increasing demand by the public for insurance covering mental illnesses provide a climate less threatened, I believe, by laws relating to privacy and libel — a climate which bears promise of continuing improvement. Certainly, I would hold this to be true if the impairments we list relate with increasing specificity to the medical framework within which these impairments are being dealt with.

Language involves acceptability, if it is to be used. There are many quite ancient words which are totally unacceptable in certain settings, though they may be short, concise, quite clear and very effective signs. It is necessary, therefore, within a specific framework of communication, to reach for another word because of the ridicule, hatred, contempt or opproprium associated with the rubric. But this changes with the times, with general information, and the usefulness of a word within appropriate settings. The non-medical rubric of 1935 "Understandard" can, by 1952, be dropped and the medical rubric "Lues," which has a reasonably factual, proper place among the many signs which suggest a medical impairment, can be used as an aid to develop appropriate underwriting information in accord with generally accepted medical practice.

In the area of mental illness, there are many words and phrases used by the public which are totally inappropriate and quite possibly libelous if used within a medical framework. It is quite appropriate, I would hold, for Harry Kirkland, that past master of the English Language, to introduce last year to this group his friend and specialist in Psychiatry, Peter Denker, by reading to us Thurber's "The Unicorn in the Garden" and its concluding moral "Don't count your boobies until they are hatched." The word "booby" here used has a general conceptual acceptance but, as a medical sign, it would have a derogatory meaning, certainly constitute a disputable diagnosis and might be considered libel. When functioning as physicians, and as medical directors we function within that discipline, effectiveness is to be gained by close identification with its knowledge and its information is most precisely made available within its language. The language of the Standard Nomenclature comes closest, I offer, to a generally

agreed upon nomenclature for diagnostic categories generally recognized by enough physicians to represent a significant cross section of those physicians who report to an insuror present or past psychiatric illness.

In 1950, as the revision of the 1952 Code got under way, a principle was stated that the number of Codes will be decreased. I have no reason to feel that this principle would be any less succinctly stated in 1960 as further revision is considered. I obviously lack the breadth of experience in either Psychiatry or Insurance Medicine to recommend specific action but correspondence with members of the Committee on Nomenclature and Statistics of the American Psychiatric Association and with Joe Wilberding, whose thorough review of the legal problems involved amounted to an excellent paper on the subject, convinces me revision of the 200 Code is needed, can be achieved with appropriate consultation and need not be in conflict with the principle that the number of Codes will be decreased though it concern itself with a large part of the spectrum of medical impairments.

PRESIDENT WILLIAMS — Thank you, Joe. This brings us to the close of our scientific program. We have had many subjects covered. I hope you feel that there has been a central theme. We started with alcoholism, and I think Henry Clifford made a very good point, that it isn't just how much one drinks that counts. There are other factors. Then we discussed the fact that there are other factors in hypertensive disease besides the level of blood pressure. There are other factors in obesity besides height and weight. There are other factors in psychiatric interpretation besides the names we tag to the conditions. In non-medical, there is more than age and amount in setting our rules. When ordering attending physicians' statements, we must be selective. Finally, Dr. Talbott, in his fine talk this morning, pointed out that we need communication and we need to have interpretation of modern concepts of medicine.

We have certain thanks that I would like to express. Is Tom McGurl here? Tom, will you please stand? Tom has made this meeting a pleasure for me. He has handled the relationships between the hotel office downstairs, this meeting room, our banquet hall, and our quarters. I don't know how many miles he has

walked through this building. He has certainly been a help. I would also like to tell you that he is personally and solely responsible for getting those theatre tickets for your wives. I think we all should give Tom a big hand.

Now, I don't want to review all of the work of the Committees. You heard their reports. Dr. Larson did a tremendous amount of work with Professional and Public Relations. I would like to thank him. The other Committee Chairmen have done fine jobs, too. I won't take the time to go through this list.

This Organization would not work if we did not have the fine Organization in Newark that Roy Schaaf runs, with the assistance of Miss Sommese. Miss Sommese is in the door now. I would like to give Roy and Miss Sommese a hand.

You reelected all of your officers but one. We have one new officer, who takes office at this time, our new Vice-President. I will ask Sergeant Pepper if he will stand. We look forward to his long term of office in the Association. The other officers, you saw on the podium last evening.

I have one more introduction to make, and it gives me a great deal of pleasure. I have known him for a long time. He was born in a small college town called Davidson, and he attended the school by that name, a very fine southern Presbyterian college. He was a diligent student in medical school. I can vouch for that, because I was in the same class. He went on with his medical education at Henry Ford Hospital in Detroit. He wasn't satisfied there so he went to study abroad and served in the American Hospital in Paris. He came back to this country and was certified by the Board of Internal Medicine, practiced in New York, and got the insurance "bug."

Dr. Gudger served in the insurance field in Hartford, but he has been back in New York now for some years. He has served this Organization long and faithfully as its Editor, as a member of Committees, as Vice-President, and as President-Elect. Jim, will you come forward now and take the duties of the President?

To represent this Office, I hereby hand Jim a copy of Robert's *Rules of Order*. I also have another symbol of the Office, the gavel which was presented to this Organization by Dr. Barker.

PRESIDENT-ELECT GUDGER — Thank you, Ennion, for your

gracious and kind introduction. Fellow members, I greatly appreciate the honor and the privilege of being elected your President. It will not be an easy task to follow Ennion Williams. His program just completed will certainly be an inspiration to me. We are indebted to him for his splendid service to this Organization, so willingly given, for so many years.

At this time, I am delighted to have the opportunity of asking Dave Garner to please take the floor for some remarks.

DR. GARNER — Thank you, Jim. Ennion, will you please come to the podium? President Gudger, Dr. Williams and Members of the Association: I am most happy to speak for the Association and to convey to Ennion our sincere appreciation for such an outstanding meeting. It affords me also an opportunity to pay tribute to one whom I have known since college days, with whom I have worked, and who was responsible for my entering the insurance field.

Ennion comes from a well-known Virginia family, a long line of distinguished Episcopal ministers and physicians. His father was one of the pioneers in the Public Health field and was President of the Medical Society of Virginia for two consecutive years, an honor no other physician has enjoyed.

Ennion has contributed much to the Association and has served it with distinction in many capacities. He, likewise, has been very active in the Medical Section of the American Life Convention and served as its Chairman in 1950. His interests have not been confined to life insurance medicine alone. He was an instructor in medicine at the Medical College of Virginia in the thirties. He has continued to take an active part in his local and state medical societies and has served as an associate editor of the latter's official publication for the past 10 years. Truly, we can say that he has been a leader in every sense of the word and that he merits the plaudit, "Well done," for the year just completed.

Two years ago at Hartford, the custom was instituted of giving the retiring President something that would carry with it fond memories of his year as President. Ennion, I have the honor of presenting to you, in behalf of The Association of Life Insurance Medical Directors of America, this silver tray. It is inscribed: "*Ennion S. Williams, President, The Association of Life Insur-*

ance Medical Directors of America, 1959-1960." With it, too, go the esteem and respect which each of us has for you, and our continued good wishes for your future.

PRESIDENT WILLIAMS — Thank you very much. I have enjoyed being Chairman. The first day, every time I made an introduction, my hands got wet but, yesterday and today, I have had dry hands and it has been a great pleasure.

PRESIDENT-ELECT GUDGER — Thank you, Dave. All of us join in this fine tribute to Ennion, which is so richly deserved.

May I remind you again that our next meeting will be in New York in October 1961. Our host will be the Hotel Astor, one of the unique and interesting localities in the City. We hope that you will all find it convenient and comfortable. The dates for the meeting are October 18, 19 and 20. Assisting me with the hotel and program details will be Dr. Howe, Dr. Winder, Dr. Pepper, Dr. Larrabee, and my associates, Dr. McGurl and Dr. Pollack. If any of you have suggestions for the program, or any material that you can contribute that would be of interest to the Association members and which you will share with us, please let me know. To attain our objectives, we must keep up with the progress in medicine and constantly improve our underwriting procedures. Your participation is invited. Your criticism will be welcome. Your ideas are needed.

If there is no other business to come before the meeting, it is now adjourned.

PRESENT AT MEETING

The following doctors were present at some time during the sessions:

N. E. Adamson, Jr.
F. B. Agee, Jr.
A. B. Ainley
A. C. Albright
J. O. Alden
T. H. Alphin
Joseph Altman
K. W. Anderson
P. A. Anderson
N. L. Armstrong
R. D. Atkinson
J. W. Avera
A. B. Ayers

N. J. Barker
S. F. Bassett
C. C. Beach
W. B. Bean
J. E. Bee
M. F. Bell
D. M. Benford
F. P. Bicknell
W. R. Bishop
H. W. Blackburn
William Bolt
D. T. Book
M. T. Boss
J. R. Bowen
T. R. H. Box
S. E. Bradley
W. R. Bradley
K. F. Brandon
D. J. Breithaupt
H. J. Brekke
E. J. Brogan
A. W. Bromer
A. E. Brown
C. H. Brown
F. R. Brown
H. B. Brown
R. F. Buchan
D. E. Bulluck

R. T. Cain
D. B. Campbell
R. L. Candage
P. H. Charlton
A. H. Clagett, Jr.
N. S. Clark
W. A. Clarke
R. B. Cleveland
M. H. Clifford
W. F. X. Coffey
D. R. Cole
M. S. Cole
G. R. Collyer
H. L. Colombo
B. R. Comeau
M. A. Compton
F. R. Congdon
J. L. Cook

B. W. Daynes
H. D. Delamere
F. E. Demarais
W. B. Dewar
E. T. Dewey
F. R. Dieuaide
R. J. DiSalvo
B. A. Dobbins
A. H. Domm
R. M. Donauer
J. P. Donelan
B. A. Duffy
L. B. Dunn

W. W. Eakin
L. H. Earle, Jr.
T. M. Ebers
L. J. Emanuele
P. R. Engle
P. S. Entmacher

A. H. Faber
R. K. Farnham
Frederick Fink
James Flexner
L. F. Flick
P. M. L. Forsberg
J. R. Forsythe
A. L. Forte
B. J. Foust
C. R. Fravel

F. I. Ganot
D. S. Garner
J. T. Geiger
D. B. Gelfond
E. E. Getman
C. A. Gianasi
R. B. Giles
F. W. Gluck
R. A. Goodell
George Goodkin
H. M. Goodman
R. S. Gordon
G. M. Graham
R. S. Graham
R. W. Graham
J. W. Gramer
C. H. Gray
A. C. Grunow
R. S. Gubner
J. R. Gudger
V. W. Gunter

Llewellyn Hall
F. T. Hallam
J. H. Halliday
G. W. Halpenny
T. S. Hamilton
V. G. Hammond
J. A. A. Harcourt
A. S. Harned
H. T. Harvey
N. B. Hasler
L. E. Hathaway, Jr.
H. L. Hauge
J. H. Hawkins
R. E. Henning
H. H. Hershey
E. V. Higgins
G. K. Higgins
E. C. Hillman, Jr.
J. C. Horan
W. H. Hover
E. G. Howe
George Howe
T. B. Hoxie
M. L. Hummel
F. L. Hummer
A. A. Humphrey
J. H. Humphries
J. E. Hunsinger
B. L. Huntington
J. J. Hutchinson
M. E. Hyde

A. S. Irving
J. G. Irving

F. E. Jenkins
T. P. Jernigan, III
J. W. Johnson, Jr.
R. M. Johnson
Rhodes Johnston
Nathaniel Jones
Raymond Jonnard

J. R. Karns
W. J. Karr
E. A. Keenleyside
N. R. Kelley
N. C. Kiefer
C. E. Kiessling
Richard King
C. T. Kirchmaier
R. C. Kirk
H. B. Kirkland
W. L. Knott

Phillips Lambkin
P. H. Langner, Jr.
L. G. LaPointe
A. L. Larson
Dwight Lawson
M. J. LeDoux
C. M. Lee, Jr.
H. R. Leffingwell
R. J. Lempke
C. H. Lentz
W. R. Leute, Jr.
S. M. Lewis
J. C. Lindner
R. P. Lochhead
W. C. Lowery
David Luchs
G. J. Lunz

Andre Mackay
Morton Magiday
G. B. Magill
S. J. N. Magwood
John Malgieri
A. F. Mangelsdorff
F. T. Mansure
P. V. Martin
F. A. L. Mathewson
E. S. McCabe
F. M. McChesney
H. M. McCue, Jr.
R. E. McDonald
William MacDonald
J. D. McGaughey, III
F. J. McGurl
T. J. McGurl, Jr.
R. C. MacKay
L. L. McLellan
W. J. McNamara
J. W. Merritt
H. E. Miller
L. C. Miller
M. B. Miller
W. B. Mills
R. M. Miskimon
Eugene Montgomery
R. C. Montgomery

S. R. Moore
J. F. Moran, Jr.
Leopold Morissette
J. R. Murphy

S. A. Narins
M. H. Neill
R. E. Nicholson
E. C. Noble

A. J. Oberlander
R. D. O'Connor
R. J. Oehrig
W. F. O'Neill

William Parson
J. S. Pearson
D. S. Pepper
G. A. Perera
J. I. Peters, Jr.
J. C. Pierson
T. E. Plucinski
A. A. Pollack
Sheldon Preschel
H. E. Pugsley
R. R. Prouty
A. E. Purdy
W. O. Purdy
R. S. A. Purkis
M. A. Puzak

J. H. Ready
C. L. Reeder
P. V. Reinartz
W. A. Reiter, Jr.
Jorge Rendon
W. M. Reynolds
E. L. Rippy
G. P. Robb
D. C. Roberts
A. J. Robinson
J. C. Robinson
P. I. Robinson
Manuel Rodstein
William Roemmich
E. S. Ross
T. F. Ross
P. L. Rossman
M. E. Rougraff
B. A. Ruggieri
J. K. Ruggles
N. R. Ruud
M. T. Ryman

R. S. Schaaf
K. F. Schaefer
D. O. Schultz

M. S. Schwartz
B. T. D. Schwarz
W. H. Scoins
A. F. Seibert
C. L. Sexton
T. S. Sexton
Hall Shannon
Daniel Sheehan
W. P. Shepard
J. T. Sheridan
G. A. Simpson
H. N. Simpson
R. B. Singer
J. R. Slamer
N. H. Sloan
F. H. Smith
W. A. Smith
R. A. Snider
F. A. Snyder
C. F. Spalding
F. L. Springer
H. F. Starr, Jr.
F. R. Stearns
C. S. Stephenson
D. F. Steuart
E. M. Stevenson
L. Q. Stewart
Robert Stock
R. R. Swindell

J. C. Talbot
J. H. Talbott
M. J. Taylor
L. J. Tedesco
G. F. Tegtmeyer
L. S. Thompson, Jr.
K. J. Thomson
Wallace Troup
Maurice Turcotte

J. W. Unger
H. E. Ungerleider

B. W. Vale
K. B. Vaughan
C. A. Von Thaden

P. C. Waldo
B. L. Wales, Jr.
E. J. Wannamaker
K. E. Ward
R. V. Ward
F. A. Warner
G. H. Watters
Jefferson Weed
J. L. Weinstock
J. A. Wilber

J. A. Wilhelm
E. S. Williams
A. C. Wilson
S. G. Wilson
J. S. Winder
R. G. Wood
L. S. Ylvisaker
G. G. Young
V. H. Young
R. W. Zinkann
A. R. Zintek
A. F. Zipf

Also present were:

I. H. Borgen
H. O. Brower
R. A. Burke
B. C. Cyrus
F. H. David
A. T. Everett
R. F. Fahrner
Edward King
T. H. Leath
Miss Beatrice Leonard
W. J. McBurney
A. P. Morton
B. L. Oakes
Edward Palmer
L. N. Parker
R. W. Parsons
Emerson Purchase
James Scott
B. E. Shepherd
Pearce Shepherd
Whitney Spaulding
R. E. Stearns
W. M. Stufflebeem
J. A. Talbott
Thurlow Taylor
J. F. Tenny
R. J. Vanderbeck
A. C. Webster
A. V. Whitehall
J. C. Wilberding

Total attendance at all sessions, 352.

In Memoriam

Deceased since the Sixty-Eighth Annual Meeting

Thomas M. Armstrong, M. D.
Philadelphia Life Insurance Company,
Philadelphia, Pa.
Died December 31, 1959

William R. Calderwood, M. D.
Beneficial Life Insurance Company,
Salt Lake City, Utah
Died August 7, 1960

Edward J. Campbell, M. D.
New York Life Insurance Company,
New York, N. Y.
Died September 21, 1960

Rexford W. Finegan, M. D.
Metropolitan Life Insurance Company,
New York, N. Y.
Died August 21, 1960

Walter C. Hausheer, M. D.
Prudential Insurance Company of America,
Newark, N. J.
Died February 25, 1960

Gilberto S. Pesquera, M. D.
Metropolitan Life Insurance Company,
New York, N. Y.
Died February 26, 1960

Bion C. Syverson, M. D.
Equitable Life Assurance Society
of the United States,
New York, N. Y.
Died September 18, 1960

Frederick H. Vinup, M. D.
Monumental Life Insurance Company,
Baltimore, Md.
Died January 3, 1960

Chester F. S. Whitney, M. D.
Home Life Insurance Company,
New York, N. Y.
Died April 13, 1960

Earl V. Wiedman, M. D.
Nebraska National Life Insurance Company,
Lincoln, Neb.
Died March 17, 1960

McLeod C. Wilson, M. D.
Travelers Insurance Company,
Hartford, Conn.
Died August 21, 1960

LIST OF MEMBERS OF THE ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA

Ronald T. Abbott, M. D.	Massachusetts Mutual, Springfield, Mass.
N. E. Adamson, Jr., M. D.	New England Mutual, Boston, Mass.
Fred B. Agee, Jr., M. D.	Aetna, Hartford, Conn.
Charles B. Ahlefeld, M. D.	Business Men's, Kansas City, Mo.
Allan B. Ainley, M. D.	Travelers, Hartford, Conn.
Arthur C. Albright, M. D.	Victory Mutual, Chicago, Ill.
Henry Almond, M. D.	Metropolitan, New York City
Thomas H. Alphin, M. D.	Equitable Life Assurance, New York City
Joseph Altman, M. D.	Companion Life, New York City
Alfred F. Anderegg, M. D.	Prudential, Minneapolis, Minn.
Donald A. Anderson, M. D.	Washington National, Evanston, Ill.
Frank R. Anderson, M. D.	Pacific Mutual, Los Angeles, Calif.
Karl W. Anderson, M. D.	Northwestern National, Minneapolis, Minn.
Perry A. Anderson, M. D.	Rockford Life, Rockford, Ill.
Nolen L. Armstrong, M. D.	United Founders, Oklahoma City, Okla.
Albert B. Ayers, M. D.	Connecticut General, Hartford, Conn.
Nelson J. Bailey, M. D.	Protected Home Circle, Sharon, Pa.
Bernard Baillargeon, M. D.	Alliance Mutual, Montreal, Canada
John W. Barch, M. D.	Lincoln National, Fort Wayne, Ind.
William S. Barcus, M. D.	Pioneer American, Ft. Worth, Tex.

Norman J. Barker, M. D.	Connecticut General, Hartford, Conn.
Gordon P. Barnett, M. D.	Kansas City Life, Kansas City, Mo.
Charles M. Barrett, M. D.	Western and Southern, Cincinnati, Ohio
G. Robert Bartron, M. D.	Midland National, Watertown, S. D.
Samuel F. Bassett, M. D.	Prudential, Newark, N. J.
Robert W. Bates, M. D.	Manufacturers, Toronto, Canada
Eliot F. Beach, Ph. D.	Metropolitan, New York City
James E. Bee, M. D.	Kansas City Life, Kansas City, Mo.
Murray F. Bell, M. D.	New York Life, New York City
David M. Benford, M. D.	Metropolitan, New York City
Robert A. Benson, M. D.	Metropolitan, Ottawa, Canada
Francis P. Bicknell, M. D.	State Mutual, Worcester, Mass.
Robert T. E. Bishop, M. D.	Reserve Life, Dallas, Tex.
William R. Bishop, M. D.	Provident Life Acc., Chattanooga, Tenn.
Henry W. Blackburn, M. D.	Mutual Service Life, St. Paul, Minn.
John M. Bond, M. D.	Northwestern Mutual, Milwaukee, Wis.
Donald T. Book, M. D.	Aetna, Hartford, Conn.
M. Theodore Boss, M. D.	Home Mutual, Baltimore, Md.
John R. Bowen, M. D.	Penn Mutual, Philadelphia, Pa.
Samuel H. Boyer, M. D.	Massachusetts Casualty, Boston, Mass.
Ernest L. Boylen, M. D.	Standard, Portland, Ore.
William R. Bradley, M. D.	Phoenix Mutual, Hartford, Conn.
Kenneth F. Brandon, M. D.	Aetna, Hartford, Conn.
Warren C. Breidenbach, M. D.	California Life, Oakland, Calif.

David J. Breithaupt, M. D.	Manufacturers, Toronto, Canada
Harvey J. Brekke, M. D.	Lutheran Brotherhood, Minneapolis, Minn.
Robert D. Brewer, Jr., M. D.	Prudential, Chicago, Ill.
Harry Brodsky, M. D.	Beneficial Standard, Los Angeles, Calif.
Edmund J. Brogan, M. D.	Provident Mutual, Philadelphia, Pa.
Albert W. Bromer, M. D.	Metropolitan, New York City
Arthur E. Brown, M. D.	New England Mutual, Boston, Mass.
C. Alton Brown, M. D.	Home State, Oklahoma City, Okla.
Howard B. Brown, M. D.	Massachusetts Mutual, Springfield, Mass.
Ronald F. Buchan, M. D.	Prudential, Boston, Mass.
John B. Bullock, M. D.	Life Insurance Co. of Virginia, Richmond, Va.
Douglas G. Cameron, M. D.	Prudential Assurance, Montreal, Canada
Douglas B. Campbell, M. D.	National, Toronto, Canada
Raymond L. Candage, M. D.	State Mutual, Worcester, Mass.
Alec W. Capon, M. D.	Pearl Assurance, Toronto, Canada
Paul H. Charlton, M. D.	Midland Mutual, Columbus, Ohio
Harry E. Christensen, M. D.	Union Mutual, Portland, Me.
A. Henry Clagett, Jr., M. D.	Continental American, Wilmington, Del.
Norman S. Clark, M. D.	Independent Order of Foresters, Toronto, Canada
William A. Clarke, M. D.	Travelers, Hartford, Conn.
Howard R. Clement, M. D.	John Hancock Mutual, Boston, Mass.
Robert B. Cleveland, M. D.	Equitable Life Assurance, New York City

M. Henry Clifford, M. D.	Union Central, Cincinnati, Ohio
Harry A. Cochran, Jr., M. D.	Lincoln National, Fort Wayne, Ind.
John E. C. Cole, M. D.	North American, Toronto, Canada
Irwin E. Colgin, M. D.	Texas Life, Waco, Tex.
Gerald R. Collyer, M. D.	London Life, London, Canada
Harry L. Colombo, M. D.	National Life, Montpelier, Vt.
Martin A. Compton, M. D.	State Mutual, Worcester, Mass.
Frederick R. Congdon, M. D.	Berkshire, Pittsfield, Mass.
Chester E. Cook, M. D.	Southwestern, Dallas, Tex.
J. Lindsay Cook, M. D.	Pilot, Greensboro, N. C.
Robert H. Craig, M. D.	Prudential, Boston, Mass.
Neil L. Criss, M. D.	United Benefit, Omaha, Neb.
Henry A. Cromwell, M. D.	American Capitol, Houston, Tex.
Howard K. Crutcher, M. D.	United Fidelity, Dallas, Tex.
William R. Cunnick, Jr., M. D.	Metropolitan, New York, N. Y.
Khurshed J. J. Cursetji, M. D.	Life Insurance Corporation, Bombay, India
John P. Davis, M. D.	Security Life & Trust, Winston-Salem, N. C.
Bryan A. Dawber, M. D.	Penn Mutual, Philadelphia, Pa.
Byron W. Daynes, M. D.	Country Mutual, Salt Lake City, Utah
John S. Delahaye, M. D.	Empire Life, Kingston, Canada
Harold D. Delamere, M. D.	Crown, Toronto, Canada
Aniceto Del Rio, M. D.	La Nacional, Mexico City, Mexico

Francis E. Demarais, M. D.	Life of North America, Philadelphia, Pa.
Earle T. Dewey, M. D.	Metropolitan, San Francisco, Calif.
John A. Dillon, M. D.	Puritan, Providence, R. I.
Fred Dinkler, M. D.	Great Southern, Houston, Tex.
Albert H. Domm, M. D.	Prudential, Los Angeles, Calif.
Robert M. Donauer, M. D.	Prudential, Newark, N. J.
James P. Donelan, M. D.	Guarantee Mutual, Omaha, Neb.
Verner J. Donnelly, M. D.	Prudential, Houston, Tex.
Gerald D. Dorman, M. D.	New York Life, New York City
James T. Downs, Jr., M. D.	Fidelity Union, Dallas, Tex.
Raymond L. Dross, M. D.	Prudential, Houston, Tex.
Thomas C. Dunlop, M. D.	Manufacturers, Toronto, Canada
Louis B. Dunn, M. D.	Postal, New York City
William W. Eakin, M. D.	Standard, Montreal, Canada
Lyon H. Earle, Jr., M. D.	Connecticut General, Hartford, Conn.
Theodore M. Ebers, M. D.	Connecticut Mutual, Hartford, Conn.
Rolf K. Eggers, M. D.	Lifeco Insurance, Seattle, Wash.
Laurence B. Ellis, M. D.	Boston Mutual, Boston, Mass.
Louis J. Emanuele, M. D.	New York Life, New York City
James C. Emmett, M. D.	Imperial, Toronto, Canada
Jack A. End, M. D.	Northwestern Mutual, Milwaukee, Wis.
Paul S. Entmacher, M. D.	Metropolitan, New York City

Albert H. Faber, M. D.	New York Life, New York City
J. Gilbert Falconer, M. D.	North American, Toronto, Canada
Raymond K. Farnham, M. D.	Metropolitan, New York City
Frederick Fink, M. D.	National Bankers, Dallas, Tex.
Max W. Fischbach, M. D.	Plymouth Mutual, Philadelphia, Pa.
James Flexner, M. D.	Northeastern Life, Mt. Vernon, N. Y.
Lawrence F. Flick, M. D.	Provident Indemnity, Norristown, Pa.
James G. Forgerson, M. D.	Metropolitan, San Francisco, Calif.
Philip M. L. Forsberg, M. D.	United Life and Accident, Concord, N. H.
James R. Forsythe, M. D.	Minnesota Mutual, St. Paul, Minn.
Garth E. Fort, M. D.	National Life & Accident, Nashville, Tenn.
Arthur C. Fortney, M. D.	Western States, Fargo, N. D.
John M. Foster, M. D.	Capitol, Denver, Colo.
Clarence E. Fronk, M. D.	Hawaiian Life, Honolulu, Hawaii
Robert E. Funke, M. D.	Prudential, Los Angeles, Calif.
F. Irving Ganot, M. D.	Prudential, Newark, N. J.
David S. Garner, M. D.	Shenandoah, Roanoke, Va.
Duke R. Gaskins, M. D.	H. B. A. Life, Phoenix, Ariz.
J. H. Geddes, M. D.	Northern, London, Canada
John T. Geiger, M. D.	Metropolitan, New York City
D. Barton Gelfond, M. D.	Philadelphia Life, Philadelphia, Pa.
John P. Gemmell, M. D.	Monarch, Winnipeg, Canada
Edson E. Getman, M. D.	New York Life, New York City

Charles A. Gianasi, M. D.	Continental Assurance, Chicago, Ill.
Edgar G. Givhan, Jr., M. D.	Protective, Birmingham, Ala.
Francis W. Gluck, M. D.	Monumental, Baltimore, Md.
Robert A. Goodell, M. D.	Phoenix Mutual, Hartford, Conn.
George Goodkin, M. D.	Equitable Life Assurance, New York City
Harold M. Goodman, M. D.	Home Beneficial, Richmond, Va.
Harry W. Goos, M. D.	Home, Philadelphia, Pa.
Robert S. Gordon, M. D.	Security-Connecticut, New Haven, Conn.
Charles D. Gossage, M. D.	Confederation, Toronto, Canada
George M. Graham, M. D.	Lincoln National, Fort Wayne, Ind.
Robert S. Graham, M. D.	Equitable Life Assurance, New York City
Ghent Graves, M. D.	American General, Houston, Tex.
Harris M. Gray, M. D.	Manufacturers, Toronto, Canada
Charles A. Grimes, M. D.	Prudential, Los Angeles, Calif.
Bruce F. Grotts, M. D.	Prudential, Chicago, Ill.
Albert C. Grunow, M. D.	Prudential, Newark, N. J.
Richard S. Gubner, M. D.	Equitable Life Assurance, New York City
James R. Gudger, M. D.	Mutual, New York City
Van W. Gunter, M. D.	Jefferson Standard, Greensboro, N. C.
Milton W. Gwinner, M. D.	Western and Southern, Cincinnati, Ohio
Thomas R. Hale, M. D.	Sun, Montreal, Canada
I. Macdonald Hall, M. D.	Massachusetts Mutual, Springfield, Mass.

Llewellyn Hall, M. D.	Phoenix Mutual, Hartford, Conn.
F. Tulley Hallam, M. D.	Bankers, Des Moines, Iowa
John H. Halliday, M. D.	Australian Mutual, Sydney, Australia
Gerald W. Halpenny, M. D.	Royal, Montreal, Canada
Vincent G. Hammond, M. D.	Security Mutual, Binghamton, N. Y.
Ottis E. Hanes, M. D.	Life Ins. Co. of Ga., Atlanta, Ga.
John A. A. Harcourt, M. D.	Toronto Mutual, Toronto, Canada
Alden S. Harned, M. D.	Travelers, Hartford, Conn.
Keith S. Harrison, M. D.	Australian Mutual, Sydney, Australia
Albert H. Harrop, M. D.	Great-West, Winnipeg, Canada
T. Haynes Harvill, M. D.	Universal Guaranty Life, Dallas, Texas
Donald M. Haskins, M. D.	Prudential, Boston, Mass.
Norman B. Hasler, M. D.	Commonwealth, Louisville, Ky.
Louis E. Hathaway, Jr., M. D.	Monarch, Springfield, Mass.
Howard L. Hauge, M. D.	New York Life, New York City
Thomas L. Hawkins, M. D.	Western, Helena, Mont.
Harvey D. Hebb, M. D.	Life Insurance Co. of Alberta, Edmonton, Canada
John G. Hellstrom, M. D.	Sun Life, Montreal, Can.
Milton H. Henderson, M. D.	Excelsior, Toronto, Canada
Olin C. Hendrix, M. D.	New England Mutual, Boston, Mass.
Roger E. Henning, M. D.	Aid Association for Lutherans, Appleton, Wis.
William A. Henry, M. D.	Franklin, Springfield, Ill.
Ivan C. Heron, M. D.	West Coast, San Francisco, Calif.
Edwin J. Herpich, M. D.	National American, Baton Rouge, La.

Harry H. Hershey, M. D.	Equitable Life Assurance, New York City
William D. Hickerson, M. D.	Union Central, Cincinnati, Ohio
Eugene V. Higgins, M. D.	North American Reassurance, New York City
William H. Hill, M. D.	Coastal States, Atlanta, Ga.
Ernest C. Hillman, Jr., M. D.	Mutual Benefit, Newark, N. J.
Joseph C. Horan, M. D.	Metropolitan, New York City
Arnold B. Houston, M. D.	Great-West, Winnipeg, Canada
William H. Hover, M. D.	Prudential, Newark, N. J.
Edward G. Howe, M. D.	Prudential, Newark, N. J.
Thomas B. Hoxie, M. D.	New York Life, New York City
Henry W. Hudson, M. D.	Loyal Protective, Boston, Mass.
Gene I. Hull, M. D.	Bankers, Des Moines, Iowa
Merwin L. Hummel, M. D.	Acacia Mutual, Washington, D. C.
Arthur A. Humphrey, M. D.	Federal Life and Casualty, Battle Creek, Mich.
John L. Humphreys, M. D.	Lincoln National, Ft. Wayne, Ind.
James H. Humphries, M. D.	Home, New York City
J. Edward Hunsinger, M. D.	Republic Nat'l, Dallas, Tex.
Benjamin L. Huntington, M. D.	John Hancock Mutual, Boston, Mass.
Warren J. Hunzicker, M. D.	National Life & Accident, Nashville, Tenn.
J. Morrison Hutcheson, Jr., M. D.	Life Insurance Co. of Virginia, Richmond, Va.
John J. Hutchinson, M. D.	New York Life, New York City
J. Raymond B. Hutchinson, M. D.	Acacia Mutual, Washington, D. C.
Marshall E. Hyde, M. D.	Farmers & Bankers, Wichita, Kansas

Albert S. Irving, M. D. — Commonwealth, Louisville, Ky.
J. Grant Irving, M. D. — Aetna, Hartford, Conn.
Tsugitake Isshiki, M. D. — Asahi Mutual, Tokyo, Japan

Samuel Jagoda, M. D. — State Reserve, Fort Worth, Tex.
Fred E. Jenkins, M. D. — Equitable Life Assurance, New York City
Thomas P. Jernigan, III, M. D. — New York Life, New York City
Hubert R. John, M. D. — Maccabees, Detroit, Mich.
Joseph W. Johnson, Jr., M. D. — Interstate Life and Accident, Chattanooga, Tenn.
G. William Jones, M. D. — Equitable Life, Des Moines, Ia.
Nathaniel Jones, M. D. — Peninsular Life, Jacksonville, Fla.
Raymond Jonnard, D. Sc. — Prudential, Newark, N. J.

Walter J. Karr, M. D. — Country Life, Chicago, Ill.
Edward A. Keenleyside, M. D. — Prudential, Toronto, Canada
Frank J. Kefferstan, II, M. D. — John Hancock Mutual, Boston, Mass.
Charles H. Kelley, M. D. — Hartford Life, Boston, Mass.
Newell R. Kelley, M. D. — Bankers, Des Moines, Iowa
Robert D. Ketchum, M. D. — Prudential, Los Angeles, Calif.
Roeinton B. Khambatta, M. D. — American Life, Karachi, Pakistan
Norvin C. Kiefer, M. D. — Equitable Life Assurance, New York City
Charles E. Kiessling, M. D. — Prudential, Newark, N. J.
Donald G. Kilgore, M. D. — Republic National, Dallas, Tex.

Glenn J. Kimball, M. D.	Bankers, Des Moines, Iowa
Richard King, M. D.	**Family Fund, Atlanta, Ga.**
Douglas Kinnear, M. D.	Prudential Assurance, Montreal, Canada
Carl T. Kirchmaier, M. D.	Life & Casualty, Nashville, Tenn.
Robert C. Kirk, M. D.	Columbus Mutual, Columbus, Ohio
Henry B. Kirkland, M. D.	**Prudential, Newark, N. J.**
Norman L. Knott, M. D.	**Prudential, Los Angeles, Calif.**
Paul Kurzweg, Jr., M. D.	All American Assurance, Lafayette, La.
Ewart R. Lamb, M. D.	Paul Revere, Hamilton, Canada
Phillips Lambkin, M. D.	**Guardian, New York City**
Paul H. Langner, Jr., M. D.	Provident Mutual, Philadelphia, Pa.
L. Gordon LaPointe, M. D.	Manhattan Life, New York City
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